THE

MEDICAL EXAMINER.

NEW SERIES.—NO. XL.—AUGUST, 1856.

ORIGINAL COMMUNICATIONS.

Case of Congenital Cephalocele. By W. A. Peck, M. D., Berwick, Pa.

The following case, which I have denominated *cephalocele* in its generic signification, occurred in the practice of Dr. J. A. Wilson.

On the 15th of June, the Doctor was called to Mrs. S., to attend her during her first parturition. Her gestation was of the normal term; labor advanced as usual up to the rupture of the membranes, at which time an examination was made, which occasioned no little embarrassment concerning the nature of the presenting part. An elastic, soft, and deeply fissured surface presented, which was at first supposed to be the breech, but upon further examination, none of the genitals, or other characteristics of this presentation could be detected. The nature of the part remained a profound puzzle until the birth of the *caput* solved the mystery. The tumor presented, followed by the vertex, and the child was delivered as in normal labor. The child was a female, of the usual size and conformation, save the abnormities of the head. Its physiognomy is very well represented by the outlines of Dr. Rohrer's case, as given by Dr. Meigs in his work on Obstetrics, (page 221,) though somewhat exaggerated. The form of the cranium was conical, with the frontal region somewhat flattened, and the occipital bone quite protuberant;

though, as a whole, symmetrical, and of the usual size. This shape of the cranium, with an imperfectly developed state of the inferior maxilla and prominent malar bones, presented a peculiar vacant, idiotic expression. The cranial bones were completely ossified and firm; suture complete; and fontanelles closed, or nearly so.

The integuments presented at first their normal temperature and color; vessels full, with occasional pulsation; and the scalp thinly covered with hair, except on the most exposed portions of the tumor. The tumor was about the size of the fœtal head at "term;" in its general contour spherical, and about equally divided on the surface by a transverse fissure, of an inch in depth. Its attachment was by a pedicle, of about two inches in diameter, whose centre occupied the occipital protuberance. The upper margin of the pedicle extended to the lambdoidal suture, and its inferior attachment to the inferior semi-circular ridge of the occipital bone. The skin covering the tumor presented its normal appearance near the pedicle, and in the fissure, which shaded off, however, into an attenuated, transparent structure, through which could be clearly recognized large patches of capillary erectile tissue, and plexuses of dilated veins. In consistence, the tumor was quite soft, elastic and distinctly fluctuating. It was loosely attached to the skin, as also to the cranium. Its softness enabled me to demonstrate the continuity of the occipital bone under the pedicle, by inserting my fingers from either side, until the whole tract was explored. By firm and constant pressure, which had the effect of awakening the child from its usual somnolent state, its size could be very much reduced. When thus reduced, pulsation was but slight, but fluctuation more palpable. Long continued compression of the carotids also had the effect of reducing its size and corrugating the skin on its surface. When in its ordinary state of tension, a venous murmur was very perceptible.

This is the result of my physical examination, six days after the child's birth; and I am assured by the Doctor, that this accurately defines its previous history. At this time, the transverse diameter was 4 inches, vertical about 5 inches, and circumference about 13 inches; though these measurements were variable at different times of the day, owing to the different

states of the circulatory system, or at least were coincident with them.

A few hours after birth, the child was seized with a spasm, which lasted about twenty-four hours, since which time nothing of the kind manifested itself until the day of its death. It would receive from one to two teaspoonfuls of nourishment at a time with facility, after which, fluids would be ejected from the mouth without deglutition. Its bowels were disposed to be costive, though not enough so to demand much medication. However, the skin became very much jaundiced, and the urine scanty and deeply tinged with bile. The child now became lethargic, with an entire absence of voluntary action of any kind.

The skin of the general surface, in the morning was cold; this was succeeded by ordinary heat during the middle of the day, and in turn in the evening by high fever. When the general surface was cold, the tumor was very much reduced in size, and its investing integument corrugated. When natural temperature succeeded, the tumor presented the character above described; but when fever set in, there was a strong determination of blood to the head; the face, scalp, and eyes were deeply suffused; the arteries were throbbing; veins distended, and the tumor greatly enlarged; becoming more firm, less fluctuating, with an increased pulsation and venous murmur, and the skin shining and transparent. The child would now be wakeful. These exacerbations of fever passed off with copious perspiration during the last two days of its existence. During the same period, and at the time of the chill, the left arm, side and leg became livid, and spasmodically affected, without any concurrent action of the right side. This was attributed to an ulcerative abrasion of the skin on the left side of the neck, which, as it merely affected the skin, could afford no adequate explanation of the phenomena. During this time, the tumor was undergoing very important changes. Its growth was rapid; so much so that at the day of its death (then twelve days old), its several diameters were one half greater than those above given.

Through the importunities of the friends, Dr. W. was induced to puncture the tumor with a lancet. This was followed by profuse arterial hemorrhage, which persisted, in spite of styptic applications, for two days. On examination I discovered

that the site of the wound was *in a large tract of cutaneous erectile tissue.* The hemorrhage was followed by a copious serous exudation.

The attenuated portion of the integument had now become mottled and livid. In some places exudations would take place which would discharge a sero-sanguinolent fluid; at others, large patches of skin would vesicate, which, when ruptured, would discharge large quantities of *sero-purulent* fluid. Unlike the sanguineous discharges, the serous, when profuse, would very materially lessen the size of the tumor. These effusions now became very copious, excoriation very extensive, and finally the whole mass became succulent and loathsome, and on the twelfth day the unfortunate being died.

It is to be very deeply regretted that circumstances prevented an autopsic examination, which would have relieved us of the necessity of making a conjectural diagnosis. When we take into consideration the peculiar form of the cranium, the exacerbations of chills and fever, the suppression of the secretions, the spasmodic and paralytic symptoms, the pedunculated form of the tumor, its situation, the fluctuation, it would seem to be a well marked case of *hydrencephalocele.* Unfortunately, however, this conclusion would be successfully controverted by a fact which was easily demonstrated, *i. e.*, that there existed no opening in the bone through which such a hernia could protrude. As before stated, the posterior fontenelle, and the entire surface of the occipital bone having any relation whatever to the cephalocele, was closely examined and with positive results. Discarding, then, the idea of *hernia meningea, or encephalocele*, we still have a dropsical tumor, as is clearly shown by the fluctuation, its being limited in its compressibility, its being most fluctuating when most compressed, by the nature and quantity of the effusions, etc. And not only this, but there is abundant evidence to show that it was a venous erectile tumor, as well. Witness, for example, its compressibility, its pulsation, the venous murmurs, the effect of long continued compression of the carotids, the effect of different states of the circulation, for example, determination, the hemorrhage, the plexuses of veins that were clearly recognizable, etc. We think ourselves justified in attributing to the tumor the two

pathological elements above mentioned, from all the rational and objective symptoms to be derived from the tumor itself. But what are we to say of the paralysis, the convulsive and spasmodic action, the coldness and blueness of the left side, and the state of the organic functions? We have but one resort, *i. e.*, if the tumor had no connection with the nervous centres, it exercised the strongest possible sympathetic sway over both the cerebro-spinal and sympathetic systems.

Concerning its cause, perhaps some might be curious to know that those matrons who are reputed to have founded medical science, marvellously elucidated the etiology of this affection in this wise: When Mrs. S. was one month advanced in gestation, her father-in-law was confined to bed with double inguinal hernia. Having an urgent call to defecate, he jumped out of bed in her presence, when by accident the distended scrotum was observed, to *her* great terror and dismay, and to the repetition of a similar deformity about the fœtus, *perhaps erroneously* upon the head, and most certainly so, in that the fissure was transverse.

It required no great stretch of their imaginations to suppose this idea absolutely confirmed, by the presence of the fissure, which they supposed to be the septum. By the way, physical examination proved this septum to be merely apparent.

I do not feel warranted in discarding this explanation, however, merely from the singularity of the site of the tumor, as there are other cases on record of similar coincidences. An account of a congenital cephalocele, occurring on a boy of 11 years, is recorded by Mr. Hosmer in the Boston Med. and Surg. Journ. for Nov., 1855, in which the following cause was assigned by the mother. "While she was pregnant, a large hog, which had recently been emasculated, passed frequently by her house. *The appearance of the animal produced an unpleasant sensation in her, which caused her always to place her hand upon her head.*" From the brief history of this case, I should judge it to be one of *encephalocele.* These cases (though dissimilar in that one tumor contained brain, and the other none,) might by some be made parallel, by taking into consideration the different states of the objects of aversion. Or, perhaps, the reverse view would be entertained by some of the great psychological lights of our age,

i. e., to suppose the tumors to be real and imaginary phrenological elongations of the cerebellum, which would be in keeping with phrenological demonstration, *i. e.*, by coincidences.

Singular Case of Death occurring twenty-two days after instrumental delivery. By J. M. GEMMILL, M. D., of Alexandria, Pa.

The following case occurred in my practice, and as the cause of the fatal result is somewhat uncertain, I submit it to the profession, in order that attention may be directed to the cause of death in similar cases.

At two o'clock, A. M., January 10, 1853, I was called to see Mrs. H., supposed to be in labor with her first child. I found her with some slight pains in the back, without any marked regularity. After waiting an hour, I examined per vaginam, and found the os uteri closed, and high up in the pelvis, without any sign of labor having commenced. I bled her about sixteen ounces, and remained a few hours, when the pains subsided.

I then left her, and was called again on the next morning (Tuesday) at four o'clock. I found her much as on the previous morning, except that she was now troubled with desire to urinate frequently, with inability to discharge more than a very small quantity at a time; but still sufficient to prevent any large accumulation in the bladder. As the pulse was full and strong I bled her a small quantity and gave her an anodyne. This relieved the pain and uneasiness, but on the next day the difficulty in urinating had increased, and the bladder was distended. On examining by the vagina, the head of the child was found low down in the pelvis, but the os uteri undilated. On introducing the common female catheter, the bladder could not be reached. I then took a flexible male catheter, and passed it up nearly the whole length, and through this a portion of the contents of the bladder was discharged. From Tuesday morning she had no pain except that produced by the distension of the bladder. On Thursday the condition of the patient was about the same as on the preceding day as it regards the urinary organs, and by the use of the M. catheter, the contents of the bladder were discharged. The os uteri was now fully dilated, and the distended membranes were felt just within the os externum. The head

was low down, though still surrounded by the lips and neck of the womb, and yet she had no pains like those of labor.

She had by this time become feverish, and her feet were considerably swollen. With the hope of exciting labor pains, I now ruptured the membranes, and discharged a large quantity of very offensive liquor amnii. I left her with directions to send for me if labor should come on.

Having heard nothing from her, on the next day (Friday) I visited her and found her with hot skin, full, frequent pulse, swelled feet, great thirst, &c. The child's head now rested on the perineum, the bladder was distended, but still there was no labor pain. I now gave her ergot in full doses without any effect, and then determined to deliver with the forceps. After evacuating the bladder and rectum, the forceps were introduced and the child delivered without much difficulty. The placenta was detained by extensive adhesions and hour-glass contraction. To accomplish its delivery, the hand was introduced and the placenta peeled off by the fingers, and brought away on withdrawing the hand. This was effected without much loss of blood or any unusual difficulty. She was, however, much exhausted, and required some gentle stimulus to revive her. This was ordered, and the womb being well contracted, I left her for the night. On the following morning reaction was established; as she had passed no urine, the catheter was introduced, and the bladder emptied. The nurse was instructed in the use of the catheter, and directed to use it three or four times in twenty four hours, which she was able to accomplish without any trouble. On the next day she began to have irritative fever, which ran high, without any pain or tenderness in the abdominal or pelvic regions; the appetite failed, the bladder required the use of the catheter, and the vaginal discharge was very offensive. She was treated for these symptoms as circumstances seemed to demand, for about ten days, when they began to subside. The pulse came down from 120 or 130 to from 90 to 100; the appetite improved and convalescence seemed to be established. On the 27th of the month she was able to sit up, the appetite was good, and every thing progressed favorably, except that the bladder had not yet recovered the power of expelling its contents, and the bowels required an occasional teaspoonful of castor oil. She

was taking quinia and iron by hydrogen, in small doses frequently repeated.

On Monday evening, January 31, I visited her, and found her pulse ninety in the minute, tongue clean, no pain or tenderness any where, the appetite good, and all the functions well performed, except that the urine had to be drawn off by the catheter, and the bowels did not move without medicine. As there had been no discharge from the bowels for several days, I directed her to take one teaspoonful of castor oil the next morning, if there should be no discharge in the mean time; and to continue the tonic medicine. At this visit she appeared to be entirely well, except the debility and the want of power in the bladder to expel its contents.

On Tuesday evening, about twenty hours from the time I left her, I was sent for to see her. On my arrival I found her pulse beating one hundred and sixty-five in a minute, great dyspnœa, and almost complete inability to talk from shortness of breath; and fainting on the slightest exertion. On examination I found there had been no hemorrhage; there was no abdominal distension, pain, or tenderness. I learned from the nurse that she had taken a teaspoonful of castor oil in the morning, which had moved her bowels twice freely by noon. At this time she felt quite well. About three o'clock she complained of being tired lying, and said she thought she would feel better if she sat up. This she had frequently done before. She was taken up and placed in an armed chair, but had only sat a few minutes when she fainted. She was laid down as soon as possible, but on emerging from the fainting fit, the above mentioned distressing symptoms presented themselves, and continued till death ensued, about five o'clock the following morning.

No post-mortem examination was permitted, although earnestly solicited. The question presented for solution is, What was the cause of death? I can conceive of no cause that will account for the symptoms presented, except the formation of a heart clot.

On the preceding evening her heart beat ninety in a minute, and her breathing was natural, and I have no doubt this continued to be the case until she was taken up and placed in the chair. Her husband stated that when he was in to dinner at

noon, she appeared quite well, and the nurse said she continued so until the fainting fit occurred, immediately after which the symptoms above described made their appearance. What other cause could produce the great change in the heart's action, and the respiratory function? I can conceive of none. The probability is that the fainting was caused by assuming the erect position soon after having had two free discharges from the bowels; and during the cessation of the heart's action the blood in one or more of its cavities coagulated in such quantity as to interfere with its functions to such a degree as to produce the symptoms presented, and ultimately death. In the absence of a post-mortem examination this seemed to me the most plausible explanation, and such was my diagnosis at the time.

The dilatation of the os uteri, and relaxation of the soft parts, without any thing like labor pain, is rather a singular feature in the case.

Tracheotomy successfully performed for the removal of a grain of corn, which had remained seven weeks in the trachea and had commenced to germinate. By HENRY H. SMITH, M. D., Professor of Surgery in University of Pennsylvania. Reported by EDWARD SHIPPEN, A. M., Philadelphia.

As the usefulness of statistics in determining the result of surgical operations depends upon all the cases being recorded, this is reported in order to afford another instance of the success of tracheotomy performed for the removal of foreign substances from the air passages. Showing that the operation on an uninflamed trachea is most frequently followed by favorable results, though in croup its success is only in the proportion of about one in five.

The patient G., from Delaware, a boy about four years old, of robust health, whilst playing with some corn, threw a grain of it into his mouth, and soon after became black in the face, and evinced other signs of strangulation. In a few seconds respiration returned and the spasm passed off, leaving him exhausted, with impaired voice and subject to frequent spells of spasmodic cough of great violence, and repeated attacks of strangulation. As the corn was not dislodged by the emetics given by the at-

tending physician, and as the cough increased, the mother was advised to bring the child to Philadelphia for surgical treatment.

Upon Dr. Smith being called in, the patient was found indisposed to speak and with a disposition to cough on the least exertion, coughing spasmodically, not unlike the cough in pertussis, with a loose râle that could be heard by any one near him, and pointing to a spot near his right nipple as the seat of his pain. On ausculting the chest, loose mucous and loud sibilant râles concealed every other sign of the disorder. These râles were heard on both sides, but were more distinct on the right. A careful examination failed to obtain any positive proof of the whereabouts of the corn, and after a few days watching, noting the character of the spasms of coughing, the lividity of the countenance and the subsequent exhaustion, Dr. Smith gave his consent to the performance of tracheotomy, believing the rational signs, with the history of the case, to be sufficiently positive evidence that the grain of corn was yet in the trachea.

Accordingly, on the 5th of April the operation was performed in the presence of numerous members of the University class, the child being in a state of anæsthesia. After having checked the bleeding from the turgid veins, consequent upon the first incisions by the application of two ligatures, the trachea was opened from the first to the fourth ring, and the grain of corn seized as it rose to the orifice during the spasm consequent upon the puncture of the trachea. About two drachms of pure pus were ejected from the trachea at the same moment. The spasm having passed off, a narrow strip of pewter was passed around the neck from behind forwards, and the ends being brought to the edges of the wound were bent down so as to serve as blunt hooks and keep the muscles and integuments of each side of the wound widely apart, thus securing a patulous wound and preventing leakage into the trachea. The child being placed in bed soon rallied from the anæsthetic state. A piece of moist gauze was placed over the wound and moistened from time to time by members of the class, who very assiduously watched the patient for 48 hours. In 24 hours the hooks were removed, and the next day the edges of the wound were approximated and the child playing about the room.

Ssix days after the operation he left the city, the wound

having granulated very kindly and being nearly closed. On examining the grain of corn immediately after its removal from the trachea, it was found to be much swollen and soft, with a distinct germ or root sprouting from its end.

Mortality of Philadelphia for April, May and June, 1856; *collated from the Health Office record.* By WILSON JEWELL, M. D.

The mortality of our city for the second quarter of the year, ending June 28th, amounted to 2567. This includes a period of ninety days, and averages 28½ deaths per day. According to this statement, there has been an increase of 2½ deaths per day, over those for the like quarter of 1855. Nevertheless, the city has been healthy. The only prevailing diseases have been those of the exanthematous fevers, Scarlatina, Measles and Small Pox, the latter of which has been rapidly declining.

Measles have been very prevalent, but uncomplicated and mild in their character.

The number of deaths from diseases alone, have been 2099; the remainder were the result of Still Born, Old Age, External Causes, Debility, Malformation and Unknown.

Among males, the deaths numbered 1320; of females, 1251; exhibiting an excess of 2·67 per cent. in the male sex.

The mortality among children under one year of age (exclusive of Still Born,) was 532, equal to 20·72 per cent. Under five years 1057, or 42·34 per cent.

The excess of male Still Born children was equal to 6 per cent. for the quarter.

Of the "Endemics," the mortality was 542. A decided increase over those for the like quarter of 1855, equal to 19·25 per cent. This increase is easily accounted for, by the addition to the deaths this year from Scarlet Fever and Small Pox; the former numbering 186; the latter 99.

By comparing the deaths from Small Pox with those of the first quarter of the present year, a large falling off will be observed, amounting to 41 per cent. An evidence of the decline of the disease.

Of the deaths from this class of diseases, 418, or 77 per cent. were among children under ten years of age. Of the deaths from Small Pox, 62 were under ten years, and of those from Scarlet Fever, 178 were under ten years.

Under the classification of "Uncertain or General Seat," the deaths from which amount to 338, we would notice particularly, those recorded under the cognomen Debility, numbering 100, and Marasmus 78; constituting more than half of all the deaths under this head. We cannot believe that Debility is a disease, any more than is its correlative, strength or vigor. It is only a symptom, or a certain result, in infants especially, of an imperfect developement of the organic or functional system; or else is produced by morbid agents, acting either upon the skin, alimentary canal or respiratory tissues, resulting in diseased action, and involving other and more vital functions. A careful diagnosis would, in almost every instance, lead to a more correct result, and enable the practitioner to avoid the too frequent and too familiar use, with many at least, of the vague and unmeaning term debility, as a cause of death. Almost as much might be urged against the application of the term Marasmus, which will be found in frequent use in mortuary statistics, and in this instance accounts for 78 deaths; fifty-three of which were in children under one year of age. It is true, however, that the meaning of this word is more generally understood and more definitely applied, but we are of opinion, that by far in too many instances, as in the use of debility, it is employed at random, or as a kind of scape-goat for ignorance of the true nature of the disease, or indolence to investigate its seat. In short, if the profession at large would discriminate more closely when certifying to the cause of death, we should possess a far more perfect statistical analysis of diseases, and find but comparatively little need of the classification "Uncertain."

The deaths from diseases of the "Nervous System," partake of but little variation, numerically, from one quarter to the other. This second quarter sums up 444; of this number 309, or 69 per cent. were under five years of age. Convulsions (what cause?) furnishes 140 of the deaths, and Inflammation of the Brain 72. Under this classification, the excess of deaths among males is equal to 9·45 per cent.

The "Organs of Respiration" are charged with 623 deaths; nearly one-fourth of the whole number for the quarter. As usual, Consumption of the Lungs furnishes a large quota, nearly 61 per cent. Compared with those for last year, second quarter, there will be found an increase of 7 per cent. While a comparison of all the deaths under this head with those of the same period last year, will show a decrease of only one death in the aggregate.

Thirty-four deaths have occurred during the quarter, from Diseases of the Heart. Forty-three from Inflammation of the Stomach and Bowels. Twenty from Puerperal Fever. One hundred and nineteen from External Causes. Thirty-six from Old Age. Forty-one from Unknown Causes, and one hundred and sixty-five were Still Born.

Of children there died 1507; adults 1064.

The highest number of deaths in any one week was 219. The lowest, 159. The average of deaths weekly was 197¾.

TABLE NO. I.

Deaths for the second quarter of 1856 *classified.*

				Male.			Female.			
	Ap.	Ma.	Jun.	A.	M.	J.	A.	M.	J.	Total.
1 *Endemic & Contagious diseases*										
Zymotic or Epidemic	205	138	199	96	72	102	109	66	97	542
2 *Uncertain or general seat,*										
Sporadic diseases	128	103	107	73	49	55	55	54	52	338
3 Nervous system	177	124	143	101	61	81	76	63	62	444
4 Organs of Respiration	299	173	151	159	80	73	140	93	78	623
5 " Circulation	27	18	19	16	8	9	11	10	10	64
6 Digestive organs	50	38	35	15	18	23	35	20	12	123
7 Urinary "	7	5	5	3	3	3	4	2	2	17
8 Organs of Generation	11	13	10				11	13	10	34
9 " Locomotion	8	2	7	6		6	2	2	1	17
10 Integumentary system	1	1	4	1	1	3			1	6
11 Old age	15	11	10	4	3	3	11	8	7	36
12 External causes	46	42	33	30	25	22	16	17	11	121
Still Born	60	58	47	31	30	27	29	28	20	165
Unknown	18	10	13	13	7	8	5	3	5	41
	1052	736	783	548	357	415	504	379	368	2571

TABLE NO. 2.

1. *Endemic and Contagious Diseases—Zymotic or Epidemic.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Cholera	1	1				2												2
" infantum	16	16	29	3														32
" morbus	2	1	1			1					1							3
Croup	21	23	6	13	21	4												44
Diarrhœa	15	8	11	2	3			1	1		2	1	2					23
Dysentery	12	8	6	6	2					1	1	1		2	1			20
Erysipelas	13	12	6		1			1	4	2	5	3	1	1	1			25
Fever,	1	1			1								1					2
" Bilious	5		1						1			1		2				5
" Congestive	1	1						1	1									2
" Gastric	1	1		1	1													2
" Inflammatory	1						1											1
" Intermittent	3			1		1		1										3
" Nervous	1					1												1
" Remittent	4	3		3	2	1						1						7
" Scarlet	89	97	19	37	91	31	4	3		1								186
" Typhoid	15	24		1	2	5		5	9	8	3	3	3					39
" Typhus		2						1		1								2
Hooping Cough	10	11	9	8	4													21
Influenza		1												1				1
Measles	4	9	1	3	7	2												13
Small Pox	50	49	17	11	22	12	3	4	8	15	6			1				99
Syphilis	2		1						1									2
Varioloid	3	4	3	1	1					1	1							7
	270	272	110	90	158	60	8	17	25	29	19	10	7	7	2			542

2. *Uncertain or General Seat—Sporadic Diseases.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Abscess	3	3	1				1			2	1			1				6
" Lumbar		1							1									1
" Psoas	1	1							2									2
Anasarca		1			1													1
Angina		1		1														1
Cancer	8	9	1							5	1	4	4	2				17
Carcinoma	1	1				1						1						2
" of Breast		1								1								1
Congestion		1													1			1
Cyanosis	7	6	12									1						13
Debility	55	45	46	2	3					6	6	6	12	12	7			100
Disease of Throat		1						1										1
Dropsy	21	16	1	1	5	2	2		4	2	5	4	4	6	1			37
Fungus Hæmatodes	2									2								2
Gangrene	2	2			2				1					1				4
Gout	1											1						1
Hemorrhage	5	10	2		1		1		6	2	1	1		1				15
Inanition	7	1	7									1						8
Inflammation	2	1		1					1		1							3
" Breast	1		1															1
" Leg	2												1		1			2
" Throat	1	4	2		2					1								5
" Tonsils		1								1								1
Malformation	4	3	7															7
Marasmus	38	40	53	8	5	2	2		2	1	1	1	1	2				78
Ramollissement		1								1								1
Scirrhus	1										1							1
Scrofula	10	7	2	5	4	2		2	1			1						17
Tabes Mesenterica	5	3	4	1		1		1	1									8
Ulceration of Throat		1												1				1
	177	161	139	19	23	8	6	4	19	24	17	21	22	26	10			338

3. *Nervous Diseases.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Apoplexy	18	14				1			1	1	5	4	9	6	4	1		32
Catalepsy	1			1														1
Chorea	1	1				1							1					2
Compression of Brain		1		1														1
Congestion "	20	19	10	3	6	3	1	1	3	4	5			1	2			39
Convulsions	78	62	83	23	23	3	3		3	1	1							140
Cramp	2		1		1													2
Disease of Brain	14	9	7	4	3	1	1	1		2	3			1				23
Dropsy "	25	27	22	10	13	4	1						2					52
Effusion "	15	12	10	7	1	2		1	1	2	1	1	1					27
Epilepsy		2	1				1											2
Inflammation of Brain	39	33	21	13	15	9	3		7	2	1	1						72
Mania	1	1								1			1					2
" a Potu	6	1							1	3	2	1						7
Palsy	12	16			1					2	1	6	9	6	3			28
Softening of Brain	6	3	2		1	2			1		1			1	1			9
Sun Stroke	1								1									1
Tetanus	4							1			2	1						4
	243	201	157	62	64	26	10	4	18	18	22	14	23	15	10	1		444

4. *Organs of Respiration.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Asthma	2	3	1							1	1			1	1			5
Collapse of Lungs		1	1															1
Congestion "	24	8	8	3	5	3	1	1	1	4	1	2	3					32
Consumption "	176	204	10	11	25	3	6	23	126	81	44	30	14	6	1			380
Disease of "	7	5	1	1	3			1	1	1	1		2	1				12
" Chest		2							1			1						2
Dropsy of "	8	7	1		1	2				1	2	2	1	4	1			15
Effusion of "	4	1			1		1						2	1				5
Empyema	1												1					1
Hemorrhage of Lungs	6		1						2	1	2							6
Inflamm'n of Bronchi	29	28	24	8	9	1	1		3			2	2	5	2			57
" Chest		1		1														1
" Larynx	4	4	1	1	2	2			1	1								8
" Lungs	48	44	25	11	11	5		3	7	8	6	5	6	5				92
" Pleura	2	3			1					1	1	1	1					5
Ulceration of Larynx	1			1														1
	312	311	73	37	58	16	9	28	142	99	58	43	32	23	5			623

5. *Organs of Circulation.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Angina Pectoris	2	1			1						1		1					3
Anæmia		3		1					1	1								3
Aneurism of Aorta	1								1									1
Disease of Heart	22	12	2	1	1		2	2	6		5	6	5	4				34
Dropsy "	1	3							1	1	1		1					4
Enlargement of Heart	2	7		1		2		2	1	1	1			1				9
Fatty degeneration "		1														1		1
Gout of "	1													1				1
Inflammation of "	2	3			1	1	1			1	1							5
Rupture of Blood-vessels	1	1								1	1							2
" Veins	1												1					1
	33	31	2	3	3	3	3	4	10	5	10	6	8	6		1		64

6. *Digestive Organs.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Cancrum Oris	1	1			1	1												2
Carcinoma of Liver		1							1									1
" Stomach	1											1						1
Cirrhosis of Liver	2	1							1		1	1						3
Congestion of "	1	5	2		1						1		2					6
" Stomach		1		1														1
Disease of Liver	4	4				1			2	2		2	1					8
" Stom. & Bowels	2	2	2						1			1						4
Dropsy of Abdomen		1												1				1
Inflammat. Abdomen		1										1						1
" Liver	6	4		1			1			1	2	2	2	1				10
" Peritoneum	5	10				1			6	3		3	1	1				15
" Stom. & Bowels	20	23	11	4	5	4	2	1	4	5	1	1	3	2				43
Intussusception	1		1															1
Jaundice	5	5	4						1	1		2	2					10
Obstruction of Bowels	1							1										1
Perforation of Bowels	1									1								1
Scirrhus of Stomach		2							1					1				2
Softening "	1		1															1
Teething	2	4	3	3														6
Tympanitis		1								1								1
Ulceration of Bowels	1				1													1
" Stomach	1									1								1
" Rectum		1							1									1
Worms	1				1													1
	56	67	24	9	9	7	3	2	18	15	5	14	11	6				123

7. *Urinary Organs.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Albuminuria	3	3				1		1	1	1	1			1				6
Diabetes	1								1									1
Disease of Kidneys	3	1					1			1				2				4
Inflammation of Bladder	1	3				1			1	1			1					4
" Kidneys	1	1											1			1		2
	9	8				2	1	1	3	3	1		2	3		1		17

8. *Organs of Generation.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Amenorrhœa		1								1								1
Carcinoma of Uterus		1								1								1
Disease of "		1							1									1
Hemorrhage "		1								1								1
Inflammation of "		6							2	3	1							6
Ovarian Dropsy		1								1								1
" Tumour		1									1							1
Puerperal Fever,		20							11	9								20
Tumour of Uterus		2				1					1							2
		34				1			14	16	3							34

9. *Organs of Locomotion.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Caries	2	1					1		1		1							3
" of Spine		1							1									1
Disease of Hip	1					1												1
" Spine	2					2												2
Inflammation "		1			1													1
Rheumatism	7	1				3		1		1								8
Softening of Spinal Marrow	1					1												1
	13	4			1	7	1	1	2	1	1			3				17

10. *Integumentary System.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Anthrax	1												1					1
Purpura	1						1											1
" Hemorrhagica	3	1	1	1	1	1												4
	5	1	1	1	1	1	1						1					6

11. *Old Age.*

Old Age	10	26											1	11	17	7		36

12. *External Causes.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Asphyxia	4	6	8									1	1					10
Burns	6	6		2	3	1		3	1	1			1					12
Casualties	26	9	4	2	3	2		1	9	6	3	3	1	1				35
Drowned	23	5		1	1	1	7	2	7	3	5	1						28
Exhaustion	2	5							2	1	3	1						7
Exposure		1	1															1
Fracture	2										1		1					2
" Skull	1	1							1				1					2
Intemperance	5	6								4	6		1					11
Poisoning	1		1															1
Strangulation		1	1															1
Suffocation	1		1															1
Suicide	6	4						1	2	2	3	2						10
	77	44	16	5	7	4	7	7	22	17	21	8	6	1				121

Still Born	88	77	165															165
Unknown	28	13	10	2	3			2	1	6	5	5	3	3	1			41

TABLE NO. 3.

Deaths for the Second Quarter of 1856, *at fifteen distinct periods of life.*

Under 1 year,	532
1 to 2	228
2 to 5	327
5 to 10	134
10 to 15	51
15 to 20	69
20 to 30	278
30 to 40	232
40 to 50	160
50 to 60	119
60 to 70	116
70 to 80	102
80 to 90	44
90 to 100	10
100 to 110	
	2402
Still Born	165
Total,	2567

Included within the above table were 115 from the Blockley Alms House; 131 Blacks; 12 from the Pennsylvania Hospital; 3 from the County Prison; 1 from the Eastern Penitentiary, and 24 from the country, as follows:—

	April.	May.	June.	Total.
Almshouse,	45	44	26	115
Blacks,	47	45	39	132
Pennsylvania Hospital,	2	4	6	12
County Prison,		2	1	3
Eastern Penitentiary,			1	1
Country,	9	9	6	24
	103	104	79	286

The following table furnishes the number of deaths for each week, during the quarter, together with the sexes, the adults and children.

		Male.	Female.	Adults.	Children.	Total.
1856.	From March 29th to April 5th,	104	109	96	117	213
	" April 5th to April 12th,	110	108	95	123	218
	" April 12th to April 19th,	116	97	90	123	213
	" April 19th to April 26th,	99	90	91	98	189
	" April 26th to May 3d,	118	101	94	125	219
	" May 3d to May 10th,	92	99	83	108	191
	" May 10th to May 17th,	90	104	88	106	194
	" May 17th to May 24th,	89	87	69	107	176
	" May 24th to May 31st,	87	88	77	98	175
	" May 31st to June 7th,	108	89	68	129	197
	" June 7th to June 14th,	85	74	56	103	159
	" June 14th to June 21st,	111	101	90	122	212
	" June 21st to June 28th,	111	104	67	148	215
	Total,	1320	1251	1064	1507	2571

BIBLIOGRAPHICAL NOTICES.

The Microscope and its Revelations. By WILLIAM B. CARPENTER, M. D., F. R. S., F. G. S., &c. *With an appendix containing the Applications of the Microscope to Clinical Medicine.* By FRANCIS GURNEY SMITH, M. D., Professor of the Institutes of Medicine in the Medical Department of Pennsylvania College, &c. *Illustrated by four hundred and thirty four engravings on wood.* Philadelphia: Blanchard & Lea, 1856.

The use of the microscope has become so general throughout our whole country during the last few years, that we are confident the publication of the above work, containing an account of its various forms and appurtenances, together with a full description of the microscopic conditions of vegetable and animal life, made manifest by its assistance, cannot be otherwise than most favorably received by numbers, both in and out of the profession. The author is one of the most, if not the most attractive of living writers upon scientific subjects. Whatever he has undertaken, he has well performed. Everything he writes becomes at once popular; the merit of all his works being, that he presents his readers in clear and apposite language, and filtered through a sound and practical intellect, everything that is contemporarily known upon the subject he is discussing. In this particular we doubt whether he has his equal in the world. As an original investigator, his claims are less prominent, though even in this respect, he has done much to signalize himself. To the various departments of microscopic enquiry in particular, it is well known he has ardently devoted himself for many years; there are few, in fact, who have contributed more to its advancement. As the result of these studies, the present work, which was announced several years ago, and which we take the present occasion to recommend warmly to our readers, is now before us.

The work is divided into twenty chapters, of which the first five describe the optical principles, construction, accessory apparatus and management of the microscope, together with the proper modes of preparing and mounting objects. The following thirteen chapters are devoted to the description of the microscopic forms of vegetable and animal life, of the protophytes,

of the minute structure of higher cryptogamia, of phanerogamic plants, protozoa, &c. The nineteenth is on the application of the microscope to geology, and the twentieth on mineral objects, polarization, &c.

Regarding the application of the microscope, its use by beginners and the amount of space allotted by the author to the various departments of enquiry, the preface contains the following remarks:—

"In treating of the Applications of the Microscope, the Author has constantly endeavored to meet the wants of those who come to the study of the minute forms of Animal and Vegetable life with little or no previous scientific preparation, but who desire to gain something more than a mere *sight* of the objects to which their observation may be directed. Some of these may perhaps object to the general tone of his work as too highly pitched, and may think that he might have rendered his descriptions simpler by employing fewer scientific terms. But he would reply to such, that he has had much opportunity of observing, among the votaries of the Microscope, a desire for such information as he has attempted to convey (of the extent of which desire, the success of the 'Quarterly Journal of Microscopical Science' is a very gratifying evidence); and that the use of scientific terms cannot be dispensed with, since there are no others in which the facts can be expressed. As he has made a point of explaining these, in the places where they are first introduced, he cannot think that any of his readers need find much difficulty in apprehending their meaning.

The proportion of space allotted to the various departments, has been determined, not so much by their Physiological importance, as by their special interest to the Microscopist; and the remembrance of this consideration will serve to account for much that might otherwise appear strange. The Author has thought it particularly needful to restrain himself, in treating of certain very important subjects which are fully discussed in treatises expressly devoted to them (such, for example, as the structure of Insects, and the Primary Tissues of Vertebrata), in order that he might give more space to those on which no such sources of information are accessible. For the same reason he has omitted all reference to the applications of the Microscope to Pathological inquiry; a subject which would interest only one division of his readers, and on which it would have been impossible for him to compress, within a sufficiently narrow compass, a really useful summary of what such readers can readily learn elsewhere. So again, the application of the Microscope to the detection of Adulterations in Food, &c., is a topic of such a purely special character, and must be so entirely based on detailed descriptions of the substances in question, that he has thought it better to leave this also untouched.

It has been the Author's object throughout, to guide the possessor of a Microscope to the *intelligent* study of any department of Natural His-

tory, that his individual tastes may lead him to follow out, and his particular circumstances may give him facilities for pursuing. And he has particularly aimed to show, under each head, how small is the amount of reliable knowledge already acquired, compared with that which remains to be attained by the zealous and persevering student. Being satisfied that there is a large quantity of valuable *Microscope-power* at present running to waste in this country,—being applied in such desultory observations as are of no service whatever to science, and of very little to the mind of the observer,—he will consider the production of this Manual as well repaid, if it should tend to direct this power to more systematic labors, in those fertile fields which only await the cultivator to bear abundant fruit."

The Educational Value and Uses of the Microscope are largely dilated upon in the Introduction. Of these, the author very naturally and very correctly, we think, has a very high opinion. The good sense of the following remarks will commend themselves to our readers :—

"It cannot be too strongly or too constantly kept in view, that the value of the results of Microscopic inquiry will depend far more upon the sagacity, perseverance, and accuracy of the observer, than upon the elaborateness of his instrument. The most perfect Microscope ever made, in the hands of one who knows not how to turn it to account, is valueless; in the hands of a careless, a hasty, or a prejudiced observer, it is worse than valueless, as furnishing new contributions to the already large stock of errors that pass under the guise of scientific truths. On the other hand, the least costly Microscope that has ever been constructed, how limited soever its powers, provided that it gives no *false* appearances, shall furnish to him who knows what *may* be done with it, a means of turning to an account, profitable alike to science and to his own immortal spirit, those hours which might otherwise be passed in languid *ennui*, or in frivolous or degrading amusements, and even of immortalizing his name by the discovery of secrets in Nature as yet undreamed of. A very large proportion of the great achievements of Microscopic research that have been noticed in the preceding outline, have been made by the instrumentality of microscopes which would be generally condemned in the present day as utterly unfit for any scientific purpose; and it cannot for a moment be supposed, that the field which Nature presents for the prosecution of inquiries with instruments of comparatively limited capacity, has been in any appreciable degree exhausted. On the contrary, what *has been* done by these and scarcely superior instruments, only shows how much there is *to be* done. The author may be excused for citing, as an apposite example of his meaning, the curious results he has recently obtained from the study of the development of the *Purpura lapillus* (rockwhelk), which will be detailed in their appropriate place (Chap. XII); for these were obtained almost entirely by the aid of *single lenses*, the Compound Microscope having been only occasionally applied to, for the verification of what had been previously worked out,

or for the examination of such minute details as the power employed did not suffice to reveal.

But it should be urged upon such as are anxious to do service to science, by the publication of discoveries which they suppose themselves to have made with comparatively imperfect instruments, that they will do well to refrain from bringing these forward, until they shall have obtained the opportunity of verifying them with better. It is, as already remarked, when an object is *least* clearly seen, that there is *most* room for the exercise of the imagination; and there was sound sense in the reply once made by a veteran observer, to one who had been telling him of wonderful discoveries which another was said to have made '*in spite* of the badness of his Microscope,'—'No, sir, it was *in consequence* of the badness of his Microscope.' If those who observe, with however humble an instrument, will but rigidly observe the rule of recording only what they can *clearly see*, they can neither go far astray themselves, nor seriously mislead others.

Among the erroneous tendencies which Microscopic inquiry seems especially fitted to correct, is that which leads to the estimation of things by their merely sensuous or material greatness, instead of by their value in extending our ideas and elevating our aspirations. For we cannot long scrutinize the 'world of small' to which we thus find access, without having the conviction forced upon us, that all *size* is but relative, and that *mass* has nothing to do with real grandeur. There is something in the extreme of minuteness, which is no less wonderful,—might it not almost be said, no less majestic?—than the extreme of vastness. If the mind loses itself in the contemplation of the immeasurable depths of space, and of the innumerable multitudes of stars and systems by which they are peopled, it is equally lost in wonder and admiration, when the eye is turned to those countless multitudes of living beings which a single drop of water may contain, and when the attention is given to the wondrous succession of phenomena which the life-history of every individual among them exhibits, and to the order and constancy which this presents. Still more is this the case, when we direct our scrutiny to the penetration of that universe which may be said to be included in the body of Man, or of any one of the higher forms of organized being, and survey the innumerable assemblage of elementary parts, each having its own independent life, yet each working in perfect harmony with the rest, for the completion of the wondrous aggregate which the life of the whole presents. In the study of the one class of phenomena, no less than in the survey of the other, we are led towards that Infinity, in comparison with which the greatest and the least among the objects of Man's regard are equally insignificant; and in that Infinity alone can we seek for a Wisdom to design, or a Power to execute, results so vast and so varied, by the orderly co-operation of the most simple means."

In the chapter on the Construction of the Microscope, the Simple Microscope, Gairdner's Simple Microscope, Field's, Quekett's Dissecting Microscope, Field's Compound, Highley's

Compound, Nachet's, Smith and Beck's Student and Dissecting, Warrington's Universal, Ross's large Compound, Powell and Lealand's, and Smith and Beck's large Compound Microscope are all elaborately described by the author. "Without any invidious comparison," he remarks, "it may be safely said that whoever desires to possess a *first-class* Microscope, cannot do better than select one of the three last mentioned instruments." Of the patterns of microscopes of simple construction, capable, however, of answering every essential purpose, that of Smith and Beck's Student Microscope appears to the author (to say the least,) among the best. It is his own working instrument.

The Appendix, which is by the American Editor, contains the Application of the Microscope to Clinical Medicine, &c., all mention of which is omitted by the author for reasons above detailed. "Free use," the Editor remarks, "has been made of the excellent manuals of Beale and Bennett; and the various kindred treatises and journals have also been drawn upon." A general view of the subjects most required by students, is all that is claimed in this portion of the work. A short account of American Microscopes is also added, among which are given Spencer's Trunnion, Queen's, J. & W. Grunow's Student, and the inverted Microscope of Dr. J. Lawrence Smith, for particular descriptions of which we refer our readers to the work itself. The Appendix is illustrated by upwards of 100 wood engravings. The Editor's additions add greatly, in our opinion, to the value of the work.

In conclusion, we reiterate our recommendation of Dr. Carpenter's work as a most interesting and instructive work, full of information, agreeably told; to all who take an interest in the subjects it treats of, it will be found of the greatest assistance.

The American Edition is printed on excellent paper and is beautifully illustrated. We are pleased to see, also, that it is reprinted with the author's sanction.

Transactions of the State Medical Society of New York. 1856.

The opening paper of the Transactions is a very able and eloquent "Eulogium upon the life and character of Theodric Romeyn Beck, M. D., LL. D.," by Frank H. Hamilton, M. D.,

President of the Society. Although Dr. Beck, at the early age of twenty seven, formally relinquished the practice of medicine, having accepted the appointment of Principal to the Albany Academy, "yet his interest in the science did not cease, but to the improvement and perfection of some one or other of its departments, the balance of his life was, in a great measure, devoted," in proof which we may instance his celebrated work on Medical Jurisprudence. Did our space permit we would gladly dwell on many points in the life and writings of this eminent physician. He died on the 19th of November, 1855, at the age of sixty-four years and three months, the immediate cause of his death being a "defect in his power to assimilate."

The second article in the Transactions is a "Report on Tuberculosis and Tubercular Pneumonia," by C. B. Coventry, M. D. After a few remarks on the importance of the subject, Dr. Coventry asks, What is Tuberculosis? What Tubercular Phthisis? and answers the question by citing the opinions of Williams, Henry Ancell, Von Virchow, &c.; the "most satifactory observations on the character and development of tubercles" he deems to be those recently made by Dr. Radcliff Hall. The causes, symptoms and treatment of the affection are discussed in separate chapters; but we doubt, were we to transfer the whole to our pages, if we would communicate much to our readers that is not already familiar to the profession.

Dr. Blatchford's report on rest and the abolition of pain in the treatment of disease is an excellent paper, that will well repay a perusal; as will also Dr. March's article on Encysted Osseous Tumors. The diagnosis and treatment of these tumors are well described, and two cases are related which occurred in the writer's practice.

In Dr. Townsend's paper on "Malignant Pustule and Scrofulous Gangrene, is given the history of three cases of the former disease, occurring in three men who had been engaged a few days previously in slaughtering a diseased cow (intending to sell it), the flesh of which was, in many places, to use their own expression, "as black as their hats." One of the men died with tetanus, and the woman who washed his clothes "had afterwards a small pustule on her hand, similar in all respects to those upon the arms of the men."

We have carefully read the remaining papers, but failed to discover anything of special interest, if we except the essay on "Fetation from Coition to Parturition," by Dr. Thomas Goodsell, a gentleman on whose brow the snows of eighty winters have fallen. We recommend the perusal of the essay to those who are anxious, to use the language of the author, to "get a sly peep into nature's secret laboratory through an outer door inadvertently left a little ajar, when we apparently caught Dame Nature at her work."

The following which we extract from the President's Inaugural Address is not without interest. "Both licensed and unlicensed practitioners are thus (sec. 26) made liable in a civil action for damages in case of mal-practice; but it is only the unlicensed practitioners (sec. 27) who, in the same case, are made liable in a criminal action for *misdemeanor*, and who, upon conviction, *may be imprisoned in a county jail.*" The law of New York having made this distinction between licensed and unlicensed practitioners; it being also "the intention of our legislators that no licenses obtained in other countries, or in other States of the Union, should constitute a license to practice in their State," it becomes a duty incumbent upon the county societies, many of which have suspended their annual meetings, to continue their organizations, as the law would otherwise bear very oppressively and unequally upon a portion at least of the profession. The Transactions, we observe, are published at the State's expense.

History of the Ligature applied to the Brachio-Cephalic Artery, with Statistics of the Operation. (Paper read before the Tennessee State Medical Society, May, 1856.) By PAUL F. EVE, M. D.

A very excellent paper, in which the history of all the cases on record, commencing with Dr. Mott's celebrated operation, is fully related. The following table exhibits the invariable fatal nature of this operation:

STATISTICS OF ATTEMPTS TO OBLITERATE THE BRACHIO-CEPHALIC.

Surgeon.	Year.	Age.	Sex.	Result and Cause of Death.
1. Mott,	1818	57	Male	Death on the 26th day from repeated hemorrhage.
2. Graefe,	1822	adult	"	Death on 65th day from hemorrhage.
3. Norman,	1824	"		Death.
4. Arendt,	1826			Death on the 8th day from inflammation of sac, pleura and lung.
5. Hall,	1830	"	"	Death on the 6th day from dyspnœa and hemorrhage.
6. Bland,	1832	31	"	Death on the 18th day from repeated hemorrhage.
7. Bujalski,	before 1840			Death on the 2d or 3d day.
8. Bujalski,	"			Death on the 2d or 3d day.
9. Lizars,	1836	30	"	Death on the 21st day from repeated hemorrhage.
10. Dupuytren,				
11. Hutin,	1842	adult	"	Death the 11th hour; antecedent hemorrhage and exhaustion.
12. Porter,	1831			No ligature, patient recovered.
13. Kuhl,	1836	43		Death on 3d day of hemorrhage.
14. Liston,	1838	adult	Male	Death on the 13th day.
15. Key,	1844	"	Female	Failed, yet patient died of pulmonary distress and exhaustion.
16. Hoffman,	about 1840			Died.

" In reality the ligature was tied around the innominata in only ten of these cases, viz., Mott's, Graefe's, Norman's, Arendt's, Bland's, Bujalski's, Bujalski's, Lizars', Dupuytren's and Hutin's. In Hall's, the ligature was passed through the artery; in Kuhl's and Liston's the carotid and subclavian were tied just beyond the bifurcation; and in Porter's, Key's and Hoffman's the operation was abandoned and no ligature employed.

In every case where a ligature was applied either to the brachio-cephalic, or near its division into right subclavian and right carotid, *i. e.*, thirteen cases, death has followed; even in two where the operation was abandoned, there was a fatal result in one; and in the sixteen cases one alone recovered, and in that no ligature was used, the vessel having been simply exposed; the cure in this case was spontaneous, and in all probability entirely independent of the operation.

In this collection, embracing sixteen cases in which the ligature was attempted to the arteria innominata, I have given, as far as I could obtain it, the history of each one. Other similar operations may have been made, but these are all that are found on record.

In conclusion, after this exposition, let me ask, who will again venture *to tie the brachio-cephalic artery?*"

Headaches, their Causes and their Cure. By HENRY G. WRIGHT, M. D., M. R. C. S. L., &c. New York: S. S. & W. Wood. 1856.

This is a very excellent brochure, affording a good deal of information upon a subject which most works say but little about. Headaches in childhood and youth, in adult life and old age are severally described; the largest portion of the work, however, being very properly taken up with the description of the numerous varieties of the affection which occur during the middle periods of life. The headaches of this period are described under five heads, as being either dependant on the circulating system; on the digestive organs; on the nervous system; as rheumatic: or as headaches dependant on organic disease. The diagnosis, pathology, and treatment of all these forms are, on the whole, well described; though, we think, with more labor and research, a much more complete and satisfactory work might have been given us. Tables of formulæ are added at the end of the book.

The Dissector's Manual of Practical and Surgical Anatomy. By ERASMUS WILSON, F. R. S., &c. *The third American from the last revised London Edition. Illustrated with one hundred and fifty-four wood engravings.* Edited by WM. HUNT, M. D., Demonstrator of Anatomy in the University of Pennsylvania. Philadelphia: Blanchard & Lea. 1856.

We are glad to see another edition of this favorite Dissector, the best, in our opinion, in the English language. The present edition is considerably enlarged and much improved.

THE MEDICAL EXAMINER.

PHILADELPHIA, AUGUST, 1856.

MEDICAL NEWS.

CHANGES IN MEDICAL SCHOOLS.—Dr. J. M. Allen has resigned the Chair of Anatomy in the Medical Department of the Pennsylvania College.

Dr. T. G. Richardson of Louisville, Ky., has been elected to fill the vacancy, and we are glad to learn accepts the appointment. Dr. Richardson has been long connected with the Louisville Schools, and is well known as a successful teacher of Anatomy; he is also author of a work on that subject.

Dr. Austin Flint has resigned the Chair of Medicine, which he had occupied with so much ability for four years in the University of Louisville, and has accepted the professorship of Clinical Medicine and Pathology in the University of Buffalo, ~~of which he~~ was one of the founders, and for several years one of the chief ornaments. The Chair vacated by Dr. Flint has been filled by the transfer of Professor Rogers; and the Chair of Materia Medica is now occupied by Dr. Robert Breckenridge. Dr. T. G. Richardson has resigned the Demonstratorship of Anatomy, and Dr. Archie Cook, late Professor of Anatomy in the Kentucky School of Medicine, has been called to the vacant post.

The Kentucky School of Medicine has lost, by resignation, Dr. Lawson, Dr. Breckenridge and Dr. Cook, and gained Dr. T. S. Bell and Dr. —— Marshall, of this city. Dr. Ackley has resigned the Chair of Surgery in the Cleveland Medical College. Dr. Edward M. Moore, of Rochester, has been appointed Professor of Surgical Anatomy and Surgical Pathology in the University of Buffalo.

Dr. T. R. Jennings has been elected to the Chair of Anatomy in the University of Nashville, vacated by the death of Dr. R. M. Porter.

Dr. J. B. Biddle has been elected Physician to the Girard College, in the place of Dr. Sargent, resigned.

Examining Board.—A Board of Medical Officers for the examination of candidates for appointment in the Medical Staff of the Army will convene at Newport Barracks (Ky.) on the first of August next.

Dr. H. A. Ramsay, of Georgia, whose statistics on midwifery were the cause of no little trouble and ill feeling at the meeting of the Am-Med. Association in 1851, and who afterwards started a medical journal called "The Blister and Critic," has lately been arrested, by orders from Washington, on the charge of fabricating testimony in support of false pension claims. He procured $5,000 bail, which was forfeited by his absconding immediately. *Boston Med. and Surg. Journ.*

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The State Medical Society of Virginia, at its late annual meeting, were compelled to adjourn for a want of a quorum.—*Ibid.*

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HEALTH OF OUR CITY.—Our city has so long been in a state of almost unprecedented health, that we have for some time thought it unnecessary to do more than publish, in each number, the list of mortality, a reference to which would satisfy all interested. Within the past month, however, the list of mortality has increased considerably, giving rise, in some degree, to exaggerated reports abroad, with regard to the existence of yellow fever here. It, therefore, behooves us to state the facts of the case.

Personal reference to the books of the Board of Health, show clearly that the health of the adult population of New Orleans is good, and that the mortality list has been increased by the appearance of measles, scarlatina, hooping cough, and cholera infantum, amongst the little children—to say nothing of the effects of "dentition." The quotation of one fact may prove satisfactory on this point. For the week ending Sunday, the 22nd June, there were 35 burials in St. Patrick's Cemetery, and of these 29 were little children. Another cause of the increased mortality is to be found in the great number of deaths from phthisis during the past six months. It is well known that persons afflicted with this disease flock here from every part of the country, and as the summer opens they die off. As to rumors of yellow fever, they are totally unfounded. Up to the present date, (June 25th,) there has not been a single well authenticated case. We have made every endeavor to search out even the one or two reported cases, but could not find them. The fact is, the Charity Hospital is the unerring index to the sanitary condition of New Orleans. When yellow fever begins, it is amongst the class of persons who patronize that institution, and there we are sure to find as early cases as occur in the city. Up to this time there has not been a case of the disease, and the indications are, so far, favorable, as all the fevers there are of a mild and manageable type.—*N. O. Med. News.*

A colored woman in Arkansas recently gave birth to four little darkies—three girls and one boy. The whole lot weighed twenty-eight pounds. At the last accounts the mother was *better* than "could be expected," and the little woolly heads were all as lively as crickets. The given names of the girls are Mississippi, Ouachita and Red River, while the boy is called by the go-ahead name of Railroad. The wife of Mr. Washington French, in Mississippi, has just presented him with two boys and two girls at one birth. Mr. French was forty-five years old when he married, and has been married one year. Though commencing late, he is likely to be surrounded by a large family before old age overtakes him. Thus it will be seen that our "glorious country" is still in advance of the rest of the world, including France, in the baby producing business—to say nothing about great names for "little responsibilities"—as well as in everything else.—*N. O. Med. News.*

We copy the following note, as the same error exists in the American edition:

[To the Editor of the Medical Times and Gazette.]

Sir,—Will you have the goodness to allow me space in your Journal to correct an error which some friends have pointed out in one of my works. At p. 86 of "The Diseases of Women," the dose of strychnine is stated to be "from one-tenth or one-fourth of a grain to a grain, three times a day." Recent revelations were not needed to prove that the latter dose would be a poisonous one, nor can I explain how such a mistake happened. I have always commenced with one-sixteenth of a grain, and have never exceeded one-twelfth or one-tenth of a grain.

However the error may have happened, I feel it a duty to myself to point it out, and to express my regret for it.

F. Churchill.

15 *Stephen's-green, Dublin, June* 13, 1856.

The case of Palmer, although concluded some time ago, still occupies a large space in the English Journals. The medical testimony, we regret to say, was not, on the whole, such as was calculated to elevate the profession in the mind of the public. "There is no doubt whatever," says the Medical Times and Gazette, "but that the estimation in which medical evidence is held by society has, to use the lightest expression, not been improved by the testimony given at the trial." The following extract from the Pharmaceutical Journal, while it shows the

difficulty with which the case was environed, contains much matter for reflection to those who may be called upon to testify under similar circumstances:

"PALMER'S TRIAL is the subject which has of late chiefly engaged the public attention. A more important case to the toxicologist has not occurred for many years, and it will furnish materials for discussion in the medical journals for some time to come. We have not given any report of the case in this number, as the trial had not concluded in time even if our space had admitted of it; but we intend to place on record next month an abstract of that portion of the evidence which is interesting in a scientific point of view, and which may be useful for future reference. A complete report, comprising the circumstantial details of the slippery proceedings of a gang of blacklegs would be out of place in this Journal, and could serve no good purpose anywhere, unless as a warning and as furnishing materials for humiliating reflection on the depravity of human nature. But it is sufficiently humiliating to read some of the professional evidence, and to see science and truth decked in fancy dresses, and so disguised as to be available on either side, according to the weight of the retainer which turns the scale. It may be difficult to divest the mind of prejudice, and to avoid leaning towards the side from which the instructions are received. In the legal profession the ends of justice are balanced between the advocates, each being at liberty *per fas et nefas*, to get a verdict if he can. The more ugly the case (within certain limits) the greater the renown acquired by a victory. This license, however, may be indulged in to a disgraceful extent, and if it should transpire that such has been the case, even a legal advocate may outwit himself, and acquire notoriety at the expense of character. But there is a wide difference between the functions of an advocate and those of a witness. No license is granted to the witness to deviate from the strict meaning of the words 'the truth, the whole truth, and nothing but the truth;' and there is no class of witnesses in whom an adherence to this rule is more important than it is in those who are called upon to give evidence on abstruse matters of science, not generally understood by the public, and therefore requiring to be stated in the clearest manner, divested as much as possible from technicalities. A scientific witness, with his head full of hard words and abstract theories, may mystify judge and jury, and defeat the ends of justice by a pedantic display of his knowledge and an ingenious suggestion of possibilities which may or may not be foreign to the question at issue. Those whom it is his duty to inform with regard to matters of fact, being unable to follow him in his theoretical flights, and not understanding the drift of

the argument, are likely to attribute importance to that which may have been suggested merely to lead them on the wrong scent. We have on several occasions pointed out this abuse of power, on trials in which chemical witnesses were arrayed against each other, and the court confused with conflicting statements, irrelevant or irreconcilable. These remarks do not apply generally to the witnesses in Palmer's trial. Some of those to whom they are applicable have already been commented upon, and the scientific evidence will be further scrutinized by the profession. As this case will be cited on future occasions, it is important that the facts should be sifted by impartial authorities, and the truth satisfactorily established. The prisoner is not the only party concerned, but future verdicts will be affected by the decision on some of the questions at issue. It was truly remarked by the Attorney-General, that if it be taken for granted that strychnia had not been administered because it had not been found in the body, this doctrine would enable many a guilty man to escape, who, by administering the smallest quantity necessary to destroy life, might prevent its detection in the stomach. It was admitted by witnesses on both sides that the portion of the poison which kills is absorbed in the blood, and it is, therefore, only the excess over and above the fatal dose which would be found in the stomach. It must be obvious to any impartial person who considers the evidence respecting the *post-mortem* examination, that the mode in which it was conducted, and the condition in which the portions of the body were sent for analysis, were most unfavorable for the elucidation of the truth. The stomach, instead of being carefully removed with its contents, was cut from one end to the other, the contents taken out and said to have been afterwards thrown into a jar containing intestines and other portions and contents of the body. Whether the whole of the contents of the stomach, or only a portion or none at all, were thrown into the jar, may admit of some doubt, as the statements on the subject are rather confused. Moreover, the party interested in the suppression of evidence was present, and was rather officious in his interference with the proceedings; he was not then an object of definite suspicion, and was not watched so closely as he would have been if this had been the case. Under these circumstances, with this confused mass of materials, Dr. Taylor commenced his investigation. Although strychnia had been mentioned to him among other poisons which the prisoner had in his possession, the circumstantial evidence forming the principal ground of suspicion with regard to that poison had not then transpired. He found the tissues of the body saturated with antimony. This unusual circumstance led him to pursue his experiments in that direction, and he gave evidence accordingly at

the inquest. After he had given his evidence, other witnesses were called, who described the symptoms under which the deceased had died, with other facts relating to the behaviour of the prisoner, and the administration of medicine. Upon this the conviction on his mind was irresistible that strychnia must have been the cause of death, and he gave his opinion to that effect, as the result of the evidence which he had heard. He afterwards renewed his investigation with the remaining portion of materials with reference to strychnia, and experimented on several animals to obtain confirmatory results. But the process for detecting antimony would destroy the materials experimented on, so far as relates to the chance of detecting an organic poison, such as strychnia. Those portions, therefore, which had been so dealt with were no longer available; and if they had contained any amount of strychnia, the evidence was lost. In the materials that remained, no strychnia was found; but this proves nothing. It neither proves that no strychnia was administered, nor does it imply neglect or incompetence in the chemical examination.

It would appear from the statements of some of the witnesses that a revolution had taken place in the science of Chemistry in regard to the detection of strychnia. It was the generally-received opinion that the detection of vegetable poisons of this class was attended with considerable difficulty, when mixed with the contents of the stomach and other matters existing in the body. The tests for strychnia, when pure, are as delicate as those for arsenic or any other poison, but it has always been understood, and is stated in all works on the subject, that the difficulty of isolation from extraneous matters greatly perplexes the Chemist, and may lead to negative results even when the poison is known to be present in notable quantity. We are now told by some of the witnesses in this case, that however minute the quantity, however contaminated with the tissues or contents of the body, they could have detected it. We are told that after a lapse of weeks, or even months, the poison may still be found in the body; that it exists in the blood and in the tissues; that the failure of detection, even if less than a grain had been administered, could only arise from some defect in the process. One of the witnesses for the defence incautiously remarked out of Court that he had no doubt as to the cause of death, but 'Dr. Taylor had not gone the right way to work to find the poison;' and, on cross examination, the remark was brought home to him in Court. Another witness on the same side was 'proving so much,' that, we are told, the prisoner became alarmed, and requested that he might be taken down, as he was damaging the case. No less impolitic was the endeavor to account for

the symptoms by wild theories about mental excitement on winning a race, apoplexy, epilepsy, bilious disorder, syphilis, convulsions with tetanic complications, &c. Lord Campbell, in summing up, said, 'It is in my opinion indispensable to the administration of justice, that a witness should not be turned into an advocate, nor an advocate into a witness. You must say, gentlemen, whether some of those who were called for the prisoner belonged to the category I have described—that of a witness becoming an advocate.' The most experienced professional witnesses, men whose opinion has the stamp of authority, said, without hesitation, that they were acquainted with no form of natural disease to which the symptoms described could be attributed, and that these symptoms were precisely those which follow the administration of strychnia.

Fortunately for the ends of justice, the chain of evidence was sufficiently conclusive without the confirmation of the presence of strychnia in the body. The prisoner's circumstances were desperate—instant ruin stared him in the face; he was involved with Cook and others in bets, bill transactions, and forgeries; there seemed no escape except by poisoning somebody; he was officious in giving Cook medicine, which was in several cases followed by vomiting; he bought strychnia twice, administered two doses of pills, which were followed by symptoms resembling nothing but the effects of strychnia. The breath had scarcely left his friend's body when he was detected searching his pockets. The betting-book vanished—money which Cook had the day before, also vanished. The prisoner who had no money the day before, was suddenly in funds. Again, his conduct at the inquest—the bribe of £10 offered to the postboy if he would upset the fly with the jar of materials for analysis—the tampering with the Coroner, and interception of letters at the Post-office—the detection of antimony in the body, and numerous minor incidents, completed the chain of evidence sufficiently to remove all doubt as to the guilt of the prisoner.

There never was a case more ably and carefully got up, both on the part of the Crown and on that of the defence. The trial occupied twelve days, and no circumstance was overlooked or disregarded which could by possibility assist in promoting the ends of justice.—*London Pharm. Journal.*

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Palmer's trial has had the effect of inciting the profession to the discovery of several new tests for the presence of strychnia. We place two of them on record:—

The Frog Test for Strychnia.—I have been enabled to detect

the 1-2500th part of a grain of the acetate of strychnia. The *young* frog fresh from the pools is the most susceptible to the influence of this extraordinary agent. All young animals are more susceptible than the adult of the same species. The frog is most susceptible of all. It is not less strychnoscopic than galvanoscopic. In proceeding with an inquiry we should begin with the frog, because it is the most detective. We may proceed to use other animals, but these can only detect a larger dose of the poison, and they are in nowise more satisfactory. The phenomena in them are less distinctive even than in the frog. In one case I gave one-sixth of a grain of the acetate of strychnia to a cat. It proved fatal. Some time having elapsed, Mr. Lloyd Bullock prepared the contents of the stomach, and we induced strychnism in three frogs in succession. The dose of poison would scarcely have affected another cat or rabbit. A kitten was killed by one fiftieth part of a grain, and an adult cat by one-thirtieth of a grain of the acetate of strychnia. This would, I should think, not have been detectable by another kitten or cat, as taken from the stomach. But many times less would be detectable and demonstrable by means of the strychnoscopic frog.—*Dr. Marshall Hall in Lancet.*

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Tests for Strychnia.—So many inconsistencies and inaccuracies have lately appeared in the public papers respecting the discovery of strychnia in the dead body, that I think it right to say that there is not any material with which it can be mixed in the animal body, or process of putrefaction that can in any way interfere with its extraction and recognition. Tartar emetic, common salt, a little nitre, bile, sugar, and a score of other things will destroy its reaction when the tests are performed by those who are not acquainted with the principles of chemistry; but in the hands of the adept such difficulties are instantly overcome.

As to the so-called fallacies of the color-tests for strychnia, these also are fallacies only when the tests are improperly performed; but, to do away with all possible sources of doubt and fallacy from the action of external reagents, I may state that the putting of a little strychnia with sulphuric acid, on a piece of platinum foil, then connecting the foil with the positive pole of a single cell of Grove's or Smee's battery, on touching the acid with the negative pole, terminating in a piece of platinum wire, the violet color so characteristic of strychnia is instantly produced.

This mode of experimenting was suggested by the fact that the color-tests for strychnia are due to the action of nascent oxygen; and so delicate is the galvanic test, that it will discover the presence of the 10,000th

of a grain of strychnia; and besides this, its very nature is such as to do away with all possible sources of fallacy.

Laboratory, London Hospital. HY. LETHEBY.

The defence in the case of Palmer, and the whole of the subsequent proceedings to obtain a reprieve, are founded on the assumption that if "strychnine were administered to Cook in his lifetime, it is now in his body, and can be detected by means that are infallable." A portion of the public appears to me to be led into error by this assumption, the fallacy of which has not been sufficiently explained.

When strychnine, as a poison, is received into the stomach, absorption takes place; the absorption may be more or less rapid, and a portion may or may not remain in the alimentary canal at the period of death. This appears to be admitted. By absorption the poison is received into the blood, it is carried by the bloodvessels to the heart, and propelled, in admixture with the blood, by the heart with almost incredible rapidity to all parts of the body. When it reaches the nervous centres in sufficient quantity, it produces those tetanic and other symptoms which result in death.

The action of many poisons thus received into the blood is extremely rapid and transient, and they cannot remain long in the blood. There are glands, the office of which are, in fact, to separate such substances from the blood, and they are accordingly more or less rapidly separated in the secretions, as the urine, the saliva, or the perspiration, and may be detected there. That strychnine is not an exception to this law is shown by the evidence of Mr. Herapath, who detects it in the urine.

In the case of Cook, who is to affirm that, while, on the one hand, the poison was producing its deadly effects on the nervous system, on the other, it was not being separated into one or more of the secretions? On what ground can it be assumed that at the moment of death one particle remained in the blood, or any organ or structure, to tell its tale?

Two grains of strychnine, if pure, are sufficient to produce its deadly effects. There is believed to be about 25 lbs. of blood in the adult human body; and the proportion in which strychnine continues to be detectable is variously stated by Mr. Herapath and other witnesses at 1-20,000th to 1-50,000th part of the substances operated on. If the whole of the assumed quantity of strychnine were absorbed at once, and were present, equally diffused in the blood, at one instant, it would constitute, on these data, only 1-96,000th part of that fluid. But when foreign agents, as strychnia, are thus received into the blood by absorption, the process is gradual, and as they reach the heart experience has shown they become

irregularly diffused; so that if a part of the body only be examined; that part may contain more or less or none of the poison. The separation of the poison with the secretions is almost as rapid as the absorption. How rash, then, must the assertion be that strychnine must be necessarily detectable in any particular organ, or in the blood of any organ, or in that obtained from any part of the body; or that it must certainly exist in the body after death.

Professor Taylor has been assailed on the ground that the hypothesis of strychnine being decomposed in the body is an invention of his own. Nothing can be more unjust. The hypothesis, apart from its application to poisoning by strychnine, has been maintained by chemists and physiologists of the highest character for many years. It is a very general, although not an exclusive doctrine, that when foreign agents, such as strychnine, produce their effects on the living body, the decomposition of a portion of the agent results. Liebig holds that the vegetable alkaloids (to which class of chemical substances strychnine belongs), when received into the blood, are decomposed by the action of the oxygen of the atmosphere. Although I think it is to be regretted that Professor Taylor relied exclusively on this explanation of the fact, that strychnine might not be detectable after death by its own agency, there is no ground for the accusation that this gentleman invented the hypothesis to serve a purpose.

Thus, there are three prominent physiological circumstances to which, taken separately or conjointly, the fact may be attributed that strychnine was not discovered, and may not be discoverable in the body of Cook, although he was poisoned with that substance. 1. The too general diffusion of the poison over the mass of the solids and fluids of the body. 2. The decomposition of the poison either during its action in the tissues or during its circulation in the blood. 3. The elimination of a portion of the poison into one or more of the secretions. That Cook's system was under the influence of antimony—a substance possessing the greatest activity in promoting several of the secretions—ought not to be overlooked.—*Henry Ancell, formerly Lecturer on Forensic Medicine in Ass. Journ., from Dublin Medical Press.*

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Civilization and Depopulation.—The Hawaiian nation, which, seventy years ago, was estimated variously at from 200,000 to 400,000, now only counts 72,000, a decrease within that period of at least two-thirds. Vast tracts of land do not harbor a human soul; fertile kalo lands, once under cultivation, are left to the rule of grass and weeds. The island of Kauai, remarkable for the productiveness of the soil, and

capable of sustaining a population of at least 100,000, contains only 6,000. It is not to cruel and devastating wars that we have to attribute this unparalleled falling off in so short a time. The wars of Kamehameha I., however energetically they were carried on, cannot in the remotest degree be compared, so far as waste of life is concerned, with those of modern civilized nations. And it is after those wars, moreover, after the blessings of civilization were transferred hither, that the blight falls most mercilessly on this doomed people. The cause of the evil is an internal one, not caused, but increased, by external influences. its investigation resolves itself naturally into these two questions—the scarcity of births, and the frequency of death.—*Polynesian.*

Died, July 1st, Dr. R. M. PORTER, Professor of Anatomy in the University of Nashville, from the effects of a dissecting wound. Dr. Porter was an excellent teacher, and a most estimable and high minded gentleman, respected by all who knew him.

Died, in London, May 1st, 1856, aged —, GEO. J. GUTHRIE, well known as one of the most eminent military surgeons of our day.

Died, in London, on the 24th April, 1856, in the 90th year of his age, HENRY CLUTTERBUCK, M. D. Dr. C. was for nearly seventy years an active member of the profession, during all which period his life was one of study and continued industry. For fifteen years he edited the *Medical and Chirurgical Review,* (1795–1809,) and was the author of several valuable works. He was three times President of the London Medical Society, and for upwards of sixty years attended its anniversary meeting.

RECORD OF MEDICAL SCIENCE.

Case of Gun Shot Wound of the Stomach. By CHARLES S. TRIPLER, Surgeon U. S. Army.

In the aggregate number of wounds received in battle, it is fair to presume that no inconsiderable proportion will involve the stomach. When a General can choose his time for engaging the enemy, he will be careful to secure to his men a good meal before hand. Men, generally, go into action with the stomach well filled. Occupying, as it does under these circumstances, so large and so central a space in the body, it can hardly escape in the indiscriminate lesions consequent

upon a well directed fire. And yet, few military surgeons have seen many cases. Hennen says he never treated one. Sir George Ballingall, though giving some most judicious observations upon the nature and treatment of these wounds, does not say that he had ever treated one. Larrey, in his campaigns in Russia and France, makes no mention of any. I am not in possession of his other volumes. Gibson reports no case in his surgery. Mr. Alcock, as quoted by Ballingall, saw but one recovery from a gun-shot wound or the stomach out of 3000 cases of gun-shot wounds. Thomson saw two recoveries after the battle of Waterloo.

There can be but one reason for all this—that is, that this lesion is almost invariable and speedily fatal. The stomach is so important an organ in its functions, in its relations, and its nervous connections, that it will rarely bear so severe an injury as that of a gun-shot wound. Hennen remarks, "Baron Percy calculates that out of twenty cases, four or five only have escaped; this, however, is a most favorable average." Sir G. Ballingall thinks Percy has abundant reasons to be satisfied with his success, and that the experience of others will hardly warrant us to expect a like result.

A just prognosis as to the issue of gun-shot wounds of the stomach cannot be deduced from the result of penetrating wounds from other causes, whether accidental, or due to operations for the extraction of foreign bodies. The circumstances are altogether different, and, in the latter case, time, place and other accidents can all be commanded. The gun-shot wound, on the other hand, partakes of the nature of a violent blow upon the stomach, a circumstance of itself frequently fatal, its extent is greater than most other penetrating wounds, its shape irregular, its situation as likely to be the most unfavorable as any other, and, in general, the time of its infliction will be when the stomach is distended with food. So, that it appears to me, that even when the sufferer reaches the hospital alive, the most unfavorable prognosis is the only prudent one in every case.

I have seen two cases of gun-shot wounds of the stomach. The first was a Mexican soldier, who fell into our hands at Enceno after the battle of Cerro Gordo. This poor fellow had a frightful wound from a musket ball toward the pyloric extremity of the stomach. He was in excruciating agony, with burning thirst, great prostration, but with the mind perfectly clear. Every drop of water given him, escaped immediately from the wound. There was no vomiting or retching in his case after I saw him. He lived nine hours from the time he was wounded.

The second case came under my care while I was serving in San Francisco, Ca.; being one of great interest and terminating favorably. I will now proceed to report it in detail.

On the 3d June, 1854, I was called to see my friend Dr. R. B. Cole who had accidentally shot himself. This gentleman was one of the proprietors of a superb apothecary's establishment, such as is seen only in San Francisco. He had been recently the subject of a tedious and exhausting malarial fever, was convalescent, and for change of air was about to make an excursion into the country for a few days. Whilst

engaged in the back part of his store, in transferring some changes of clothing from one trunk to another, he took a loaded six-barrel pistol and thrust it carelessly, muzzle foremost, into the watch pocket of his vest. Then, as he stooped over again, the weight of the weapon caused it to fall from his pocket upon the marble floor, exploding one barrel, and the unfortunate gentleman fell, merely saying "I am shot." While the messenger ran for me, the Doctor was raised from the floor and carefully placed upon a sofa that was at hand. I saw him certainly within five minutes of the occurrence, probably less. He was pulseless, pupils dilated, no sign of respiration, no vibration even of the heart, lips blue, countenance colorless, body relaxed. I opened his shirt and found a wound over the cartilages of the seventh and eighth ribs on the left side within about an inch of the sternum. Introducing the point of my little finger, it passed obliquely upward, and became engaged in an irregular opening in the cartilage of the sixth rib. Not being then aware of the position of the patient at the time he received his wound, and judging from the relative direction of the perforation in the integument and that in the cartilage, I inferred the ball had passed upward, inward and backward, traversing the heart, and that the man was dead.

While asking some questions naturally suggested by the accident, I observed a faint effort at inspiration. I gave immediately a tea-spoonful of brandy, and had the pleasure of finding it was soon swallowed, and another feeble inspiration succeeded. By perseverance in the cautious use of brandy and ammonia, respiration was re-established, and in about ten or fifteen minutes, consciousness returned and with it the mind perfectly clear. Still, no pulse could be felt at the wrist—an occasional feeble and irregular fluttering of the heart could be detected.

By this time, quite a number of physicians had clustered about the patient. I had no little difficulty in preventing some of them from turning the wounded man over, to see where the ball had come out. It was obvious that the slightest motion under the circumstances must have caused a recurrence of syncope, and might have been fatal. I could not comprehend of what possible consequence it was, what had become of the ball, and I could not agree that the feeble flickering of life remaining should be extinguished for the gratification of an unscientific curiosity.

Drs. Bertody, Stout, Mott and Hewit, of San Francisco, all personal friends of the patient and of myself, were now present, and united with me in counsel and exertion to do whatever was rational or necessary in the case. These gentlemen most kindly assisted me throughout the treatment; for the first three nights and days, one of us was constantly in attendance, and subsequently at intervals of not to exceed a half hour until all danger had passed.

It had now become plain that the heart was not the seat of the internal lesion. What was its probable seat? The signs were those of nervous shock and hemorrhage, the prostration was extreme, the pulse continued feeble and fluttering, and frequently interrupted entirely for

seconds at a time. We now knew from the patient himself how the accident occurred, and what was his position when he received the wound. His trunks were upon the floor,, and while he was stooping very far over, the pistol fell from his pocket. It was evident that, in this position, the wounded point of integument was in relation to a very different subjacent point of cartilage from that it occupied in the erect or supine position of the body; and that, therefore, the relative direction of the wound in the integument and that in the cartilage afforded no reliable indication of the true course of the ball. The only other independent element for determining this would have been the direction of the axis of the weapon, when it was discharged. This, of course, could not be ascertained, and the rational symptoms alone were left to guide our judgment. The possibility and probability of wound of the stomach early suggested itself, and the prognosis was, accordingly, most unfavorable.

By the cautions and persevering exhibition of stimulants, and maintaining absolute negation of muscular efforts, in about two hours, the heart's action was re-established though still very feeble and irregular. Any attempt to determine the number of pulsations would have been useless, as they were no two minutes alike.

The patient began to be restless and to feel some nausea. We were careful not to introduce a greater volume of fluid into the stomach than was absolutely necessary, as we feared the exhaustion to be expected from the exertion of vomiting. By dint of great effort on the part of both surgeon and patient, this was kept at bay for another half hour, when it could no longer be restrained. The patient turned his head aside, and while the body was supported, ejected from his stomach a coagulum of blood of about twelve ounces. The case was then solved. The stomach was the wounded organ. In what part of this was the probable seat of the injury?

Half an hour before the accident, he had eaten a light lunch not not exceeding four ounces in bulk. No fluid had escaped from the external wound. The hemorrhage into the stomach, which must have been instantaneous, was large. The position of the wound was far above the pyloric extremity of the stomach. The probabilities were therefore, that the wound was in the cardiac portion, and this was one circumstance in our favor. On the other hand, the fact of the stomach being wounded at all, the debilitated and irritable condition of the patient, the effect of antecedent disease, his nervous lymphatic temperament, his anxiety as to the result, aggravated by family responsibility and instructed by professional acquirement, all combined to suggest the most gloomy forebodings. The occurrence of hiccup a few minutes after the vomiting did not tend to quiet our apprehensions. Fortunately, this symptom soon subsided and gave us no further trouble throughout the case.

The plan of treatment adopted and rigidly adhered to, was perfect rest and quiet, the patient to be kept narcotized with Morphia, nothing to be taken into the stomach except the water in which the Morphia was dissolved and that from the small pieces of ice with which the mouth was cooled, nourishment, when required, to be by enemata of

beef tea. It was not intended that any evacuation of the bowels should be solicited for several days. I remained with him that night, and gave him from a quarter to half a grain of Acetate of Morphia, whenever signs of restlessness appeared. He had quite a comfortable night, and by morning there was an encouraging improvement in all the signs. I left him at 9 A. M., June 4th, having just administered half a grain of Morphia in a drachm of water. From that time till June 12th inclusive, the following is a correct record of the quantities of Morphia and beef juice exhibited, and the time each portion was given.

June 4th,	12.15	P. M.	Acet. Morph., gr. ¼.
" "	2.5	"	" gr. ½.
" "	10.00	"	" "
" 5th,	3.00	A. M.	" "
" "	8.00	"	" gr. ¼.
" "	2.30	P. M.	" gr. ½.
" "	8.00	"	" "
" "	11.45	"	" "
" 6th,	4.00	A. M.	" "
" "	12.45	P. M.	Beef Tea, 2 ouuces by enema.
" "	1.40	"	Acet. Morph., gr. ½.
" "	6.00	"	Beef Tea, 2 ounces, by enema.
" "	10.40	"	Acet. Morph., gr. ½.
" 7th,	9.30	A. M.	" gr. ¼.
" "	10.30	"	" "
" "	"	"	Beef Tea, 2 ounces, by enema.
" "	5.30	P. M.	" " "
" "	"	"	Acet. Morph., gr. ½.
" "	10.00	"	" "
" 8th,	2.30	A. M.	" "
" "	12.30	P. M.	Beef Tea, 1 drach., by mouth.
" "	2.30	"	" " "
" "	5.30	"	" " "
" "	"	"	Acet. Morph., gr. ½.
" "	12.00	"	" "
" 9th,	5.30	A. M.	" "
" "	9.00	"	Beef Tea, 4 ounces, by enema.
" "	2.15	P. M.	Syr. Acacia, 2 drach., by mouth.
" "	3.15	"	" " "
" "	9.45	"	" " "
" "	10.45	"	Beef Tea, 4 ounces, by enema.
" "	"	"	Acet. Morph., gr. ½, in Syr. Acacia.
" 10th,	3.30	A. M.	Beef Tea, 3 ounces, by enema.
" "	8.30	"	" " "
" "	10.30	"	" 2 drach., by mouth.
" "	11.30	"	" 3 " "
" "	3.00	P. M.	" 1 ounce, "
" "	8.30	"	" 1 " "
" 11th,	9.00	A. M.	" 1 " "
" "	10.00	"	" 1 " "
" "	3.00	P. M.	" 1 " "
" "	5.00	"	" 1 " "
" "	7.00	"	" 1 " "
" 12th,	9.00	A. M.	" 1 " and one egg.
" "	1.00	P. M.	One egg.
" "	6.00	"	Cream, half ounce.

All of these prescriptions were administered in the presence of one of the surgeons in attendance; the time and qnantities of the opiate being determined by the condition of the patient. Simple dressings were applied to the wound. Under this treatment, the progress of the case was perfectly satisfactory, and, at the date of the last prescription recorded, the patient was considered out of danger.

The first attempt to administer nourishment by the stomach, was made on the 8th, at 12.30 P. M., five days after the accident. One drachm of carefully prepared beef juice was then given. Some pain followed its exhibition. The same quantity was repeated two hours afterward, but with more pain. Another attempt was made in three hours more, but the pain was so severe we were obliged to desist, and to give a grain and a half Morphia in the course of the night. A little syrup of acacia was given the next afternoon. Some pain was complained of at first, but the succeeding portion gave less. On the 10th, the beef juice was again tried cautiously, and it was found the stomach would bear it. From this time, the diet was gradually improved, but solid food could not be borne for several weeks.

Seven weeks after the injury, I extracted the ball. It had lodged just under the integuments in the space between the angle of the ribs and spine on the left side, near the last dorsal vertebra. This wound remained open till the 15th May, 1855. There is now quite an enlargement of the wounded cartilage at its junction with the sternum and extending toward the left nipple. The patient has been a great sufferer, and has frequently been obliged to support himself by crutches in his walks. In January, 1856, when I last saw him, he was apparently in very good health and had almost regained his usual flesh. He tells me that after a full meal, he feels the stomach dragging upon the ribs, and is sure it is adherent to their inner surface.

This case affords an example of the great value of the *defensive* use of opium in lesions of the abdominal viscera, or wherever inflammation of the serous tissues is to be apprehended. Considering how illy prepared this patient's constitution was, to withstand so severe an injury, I think I am justified in believing that, without the prophylactic use of opium, gastritis and peritonitis must have supervened, and in all probability would have proved fatal. In similar cases, I think it will be found easier to anticipate these accidents by the free use of opium than to remedy them by the most judicious treatment after they shall have set in.

It is further to be observed in this case that, by the constant use of the Morphia, the patient never felt a sensation of hunger, and was thus enabled to bear the protracted abstinence required without any aggravation of the existing irritability of his system.—*Peninsular Journal of Medicine.*

The Condition of Vision the Best Test of the Squinting Eye. By C. Holthouse, Esq.

It is remarkable, that among the numerous writers on the subject of strabismus there should be so little accordance as to the best test for dis-

covering the faulty eye in those cases in which the squint shifts from one to the other. To be convinced of this, one has only to refer to the works of the three latest English writers on the subject. Walton observes, "It is not an easy matter to determine which is the defective eye, and the sound eye is sometimes operated on. When this cannot be readily ascertained, I place the patient in front of me, at a distance of two or three yards, and direct him to cover one eye,—say the left,—and look at me with the other, keeping the head straight: the right eye will be in the centre of the orbit; I then direct him to uncover the left. Now, if the right, which has not been closed, is normal, it will keep its central position, while the left eye is turned inwards; but if it be deformed it will turn in, while the left will become straight. The experiment should be reversed." Again: "When a patient is under examination, he is generally excited, and exerts the orbital muscles unnaturally; and then it is out of the question to obtain a sight of the squinting eye even in a moderately quiescent state; and hence I have sometimes been obliged to wait until a second visit to detect the faulty eye." Mackenzie follows Lucas's rule for discovering whether one or both eyes are effected. "We are able readily to detect non-alternating as well as alternating strabismus, by desiring the patient to look steadily with either of his eyes at any object straight before him, while with one hand we hide the object from his other eye, but keep the hand sufficiently raised towards the temple to allow us to watch the movements of the eye which is thus shaded. Whether the strabismus is alternating or non-alternating, the shaded eye is distorted. If in such a case we close both eyes, and then suddenly raise the upper lid of either while the other remains closed, the one which is opened is seen to be distorted. If both eyes are suddenly opened, the pupil of the worse eye is discovered to be more distorted than that of the better eye. If, on trying these experiments, the eye which is shaded, or either of them, on being opened suddenly showed no obliquity, we would pronounce the eye to be sound."

Dixon observes, "When both eyes appear to be effected with strabismus and to turn inwards, it becomes a question which eye ought to be operated on. Various optical tests have been suggested to enable the Surgeon to decide this point; but it usually happens that a patient, when subjected to any of these tests, is so anxious and embarrassed, that he becomes very liable to a sudden increase of strabismus in the eye, which, on ordinary occasions, would be effected in the slighter degree; and from this cause the experiment may fail to infallibly determine the question. I believe the best rule is, to watch attentively which eye squints in the more decided manner, when the patient uses both eyes in his ordinary way, and to operate on that in which the distortion predominates."

In my lectures on strabismus, published two years ago, I pointed out the law which determines the alternation of the squint; and since then I have had abundant opportunities of testing its value, as well as proving the inutility of all other tests. This law may be thus expressed:

—The less the difference in the visual power of the two eyes, the greater the tendency of the squint to alternate; and, conversely, the greater the difference in the visual power of each eye, the less the tendency to shift.

The visual power, then, is the only test that can be depended on, and the rule of practice would appear to be this;—In true alternating squint, where the power of the two eyes is alike, it is immaterial which eye is operated on; while in the false, and by far the most frequent, variety of alternating squint, that eye should be selected for operation the visual power of which is inferior.

Shortly before my return from the East, I was requested by Dr. McCraith, of Smyrna, to operate on a young Greek lady, who squinted very decidedly, though with which eye it was difficult to determine, as it continually shifted from one to the other; it seemed however, to have a preference for the left. Walton's test failed completely; but vision was most perfect in the left; that is, in the eye apparently most affected; it was not bad in either, the patient being able to read with both, though a smaller type with the left than with the right. Notwithstanding the right eye seemed to be the straight one, I operated on it rather than on the other, owing to its less perfect vision. The correctness of the diagnosis was at once made manifest, by the extraordinary size and toughness of the tendon of the internal rectus, as well as by the rectification of the deformity in the other eye. The preference (if I may so use the term) of a squint for the better eye is a curious phenomenon that was noticed many years ago by Dr. Radcliff Hall, and is occasionally due to certain extraneous and sometimes appreciable causes. A little boy, 16 years of age, was brought to the public Dispensary for a stye on the outer part of the left upper lid; the eye on the same side was also considerably inverted. At first sight, I considered that this was a case of single convergent strabismus of the left eye; but on placing a book before it, I found its vision quite perfect; while, on placing it opposite the other, or straight eye, he could with difficulty decipher the letters. This fact at once assured me that the latter was really the strabismic organ, and that the inversion of the opposite one was only temporary. In the course of a few days, the stye had disappeared; and, as I anticipated, the squint had disappeared with it, and had been transferred to the opposite eye. I think there can be little doubt that the inflammatory condition of the eyelid in this case determined the strabismus to the good eye; for the movement of the lids, being in great measure regulated by that of the eye ball, the quiescent condition of the latter in the inner canthus would entail a corresponding condition of the former, and thus the pain arising from their movements be avoided. The bad eye was thus instinctively called into requisition, so that a superficial observer would readily have mistaken it for the good one.—*Medical Times and Gazette.*

Internal Derangement of the Knee-Joint. By GURDON BUCK, M. D. Attending Surgeon to the New York Hospital.

Under the above title the late William Hey, of Leeds, in his "Practical Observations on Surgery, &c." (London, 1814), has described an ailment affecting the knee-joint suddenly, and unaccompanied by any external marks which would disclose its nature. The following case corresponds with great exactness to Mr. H.'s description; and, inasmuch, as it is one of rare occurrence, and the diagnosis of which is perplexing, a report of it may not be unacceptable to the columns of the *Times*.

On the morning of May 24th, 1856, Mr. S., of Lowell, Mass., called on account of a lameness of his left knee that had suddenly occurred the evening before, at the moment of rising up from a position in which his knee was sharply flexed under him. He could now no longer apply the sole of his foot to the floor in walking, but was obliged to bear his weight on his toes, with the knee maintained in a slightly flexed position, and as if ankylosed. Any attempt to straighten the knee to its full extent was resisted on account of the pain it produced, which was referred to the anterior space between the inner condyle of the femur and the corresponding head of the tibia. At this point *alone*, pressure gave pain when applied with the end of the thumb forced deep into the space between the bones. It was thought, too, that the end of the thumb did not penetrate as deep into this space as in the other knee. There was no tenderness on pressure of any other part of the joint. There was no swelling or other change in the form of the joint. The same accident had occurred to him on several previous occasions; but Mr. S. had been able to get prompt relief without surgical aid, by having the limb stretched and repeatedly flexed and extended. In this instance, however, his efforts had been unsuccessful.

Regarding a displacement of the inner semi-lunar cartilage forwards, as the cause of this derangement of the joint, the reduction of it was attempted in the following manner, as advised by Mr. Hey: The patient being placed in a chair, the limb was raised above a horizontal position and the leg flexed on the thigh to its full extent, and then extend in like manner, at the same time pressure being applied over the advanced cartilage with the end of the thumb. This latter movement of extension and pressure gave severe pain, while flexion caused none. This manœuvre was repeated several times, till, at length, while urging the extension to its full degree, the patient suddenly grasped the knee with both hands and begged we would proceed gradually, as he felt the cartilage slowly slipping back to its place. In another moment he sprang upon the floor, and stamping with his lame foot, exclaimed with delight, "I am all right again!"—*New York Med. Times.*

Cæsarean Section. BY CHARLES S. MILLS, M. D.

On Monday, the 12th of May, 1856, between eight and nine o'clock in the evening, I was requested to attend immediately a negro woman

belonging to Mr. Thomas Samanni, of this city, in labor with her first child. My friend, Dr. Beale, the family physician of Mr. S., was prevented, by severe indisposition, from attending, and the case was entrusted to my care. At an early period, he had recognized the pregnancy and the difficulties by which the delivery of a child at maturity would be attended, and for the safety of the mother, had recommended a premature delivery. His advice having been rejected, he looked forward with anxiety to her approaching labor, and had spoken freely to me upon the subject. On entering the room, therefore, I was not surprised to recognize in the person of my patient, a little creature well known in our city on account of her diminutive size. She is twenty-three years of age, has generally enjoyed good health, has a large and well developed head, chest broad and full, pelvis narrow, with limbs and body remarkably short, her height being only three feet nine inches. I found her walking about the room apparently in great pain. On inquiry, I learned that she had been complaining since the previous evening, having passed a restless night, but that the violence of the pains had greatly increased within two or three hours; she was supposed to be at full term of gestation. Causing her to be placed in position for an examination, the finger readily passed along the vagina to the os uteri, which was soft and sufficiently open to admit its extremity, and felt through the membranes what I at first thought was an arm of the child lying beside its head. A more careful examination, however, soon satisfied me that instead of the child's head, this was the promontory of the sacrum projecting across the pelvis above the pubis, and leaving a space between the two bones scarcely wide enough to allow two fingers to pass, while just above the symphisis and apparently on the pubis was either an arm or a leg but which I could not yet determine. Recognizing at once the utter impossibility of effecting delivery without the aid of instruments, I left the patient with her female attendants, ordering an enema for her, and proceeded to my office to procure them. Returning in about an hour, and finding the pains active with the os uteri dilatable, I ruptured the membranes and endeavoured to pass my hand up, determined to bring down the foot if a leg presented, or turn the child in case the presenting part should be an arm. As the waters escaped I made an effort to pass my hand through the superior strait, but succeeded only in passing two fingers, and at the same moment feeling a foot of the child I brought it down. I then endeavored to find its fellow, but being unable to reach that or any other portion of the child, I tried, by traction on the presenting leg, which I now recognized as the right, with its instep turned to the hollow of the sacrum, to force down the body into the pelvis. After using as much force as I thought judicious, and finding that the body still remained out of reach, I determined to send for assistance. At least an hour elapsed before the arrival of Dr. Deane, who was absent when my messenger reached his house. Explaining to him what had been done by me, I expressed the opinion that the deformity was so great as to render embriulcia impossible, and that we should be compelled to resort to the cæsarian section. The Doctor then made a very careful

and patient examination, endeavoring to bring down the body of the child within reach of the instruments for embryotomy; but though very powerful traction was applied to the presenting leg, which seemed to fill the space between the symphisis pubis and the promontory of the sacrum, the body of the child remained immovably fixed above the entrance to the superior strait, and out of reach. He then concurred with me in the opinion that embriulcia was impracticable, and that the only chance of delivery was in the cæsarian section. Not having with me the instruments and apparatus requisite for the performance of that operation, I left him with the patient, and started to procure them from my office, when I met at the front door of the house, Dr. Bolton, who had likewise been sent for. I requested him to join Dr. Deane whilst I proceeded to get the instruments. Soon after my return Dr. Drew (whom I was happy to learn had been sent for by Dr. Deane, and, but for the lateness of the hour, near midnight, I should have requested other medical friends to lend me their encouragement in so grave an operation,) entered the room and was asked to examine the case and confer with us.

It was now proposed that the patient should be anæthetised, and an effort made to reach the abdomen of the child in order to eviscerate it, if after a more thorough examination, it should appear that the child could then be brought away. This was accordingly done, and Dr. Bolton with great difficulty succeeded in passing two fingers through the superior strait so as to reach with their extremities the abdomen of the child, but could make no use of them to conduct an instrument with certainty or safety to the mother, and was of opinion that it would be impossible to deliver the child through so narrow a passage even if we could succeed in eviscerating it. Being still loath to resort to the cæsarian section, until every effort to deliver per vias naturales had been tried and failed, the presenting leg was now enveloped in a bandage, and, the mother being still under the influence of chloroform, gradual but very powerful traction was made, hoping still to force down the body into the pelvis. The greatest force which could be applied, without risking the laceration and separation of the limb, produced no other effect than to bring down the thigh a little lower, which was so firmly bound between the pelvis and the promontory of the sacrum as to cause strangulation of the leg and foot. Upon consultation it was now unanimously thought that the cæsarian section should be made without farther delay, and accordingly, a table was prepared in the centre of the room and the requisite arrangements made for the operation. The patient was again brought fully under the influence of chloroform, and removed from the bed to the table, her female attendants being excluded from the room.

Operation.—Catheterism having been effected, though with some difficulty, in consequence of the interference of the fœtal leg and the displacement of the bladder, the patient lying on her back, with her head and shoulders slightly raised on pillows, and her knees flexed over the edge of the table, I stationed myself as most convenient, on her left side, and made an incision through the integuments from about

two inches above the symphisis pubis along the line of the linea alba, passing around the umbilicus to about an inch above. The abdominal walls, being thin, were cautiously dissected along the length of the first incision down to the peritoneum, which was carefully incised so as to admit the point of the finger to serve as a director, and the incision extended upwards and downwards, giving exit to a large quantity of serum, and laying bare the body of the uterus with a small knuckle of intestine overlapping its fundus, while the contracted bladder lay at the lower terminus of the incision and covering the cervix. The contact of cool air seemed to stimulate the uterus to contraction, and as it was no longer kept in place by the abdominal walls, I spread my hands over it to sustain it until it became quiescent. So far there had been no hemorrhage, and as the patient was fully anæthetised, (beautifully exemplifying the happy effects of chloroform) there was no necessity for holding her, and the abdominal viscera remained throughout the operation quietly in position, and offered no impediment whatever. A vertical incision was now cautiously made throughout the walls of the uterus, corresponding in direction with the external one, and about 6 or 7 inches long, dividing in its course a large uterine sinus, followed by a gush of blood, and exposing the left shoulder and arm of the fœtus, which I seized with my left hand and raised the child, while introducing my right, I caught hold of its neck and flexing it on the body, readily extracted it from the womb, which immediately commenced contracting. The placenta was detached and came away with the fœtus, of whose vitality I was assured by the pulsation felt in the vessels of the neck. The child was handed to one of the gentlemen present, whilst I, twisting the membranes around the placenta, withdrew them from the uterus. Dr. Bolton undertook the resuscitation of the child, which, in a few minutes gave utterance to the usual cry so grateful to the ears of the anxious attendants, and in the meantime my hand was kept upon the uterus stimulating it to contraction, and excluding from between its incised walls any viscus which might offer to enter its cavity. The womb being now firmly contracted and the hemorrhage checked, the clots of blood were carefully removed, and the edges of the external wound brought together and secured with six or eight interrupted stitches and a broad circular bandage. The patient was now replaced in bed and made as comfortable as possible. She had now recovered her consciousness, her pulse being very good, and general condition as favorable as could be desired, when we left her with her female attendants, enjoining perfect quiet, and ordering that a pill containing a grain of opium should be given to her every hour, until sleep was produced.

Tuesday, 13th, 9, A. M.—Patient has taken three of the opium pills; slept some and feels comfortable; pulse 104; soft and compressible; abdomen tender and slightly tympanitic; skin moist and cool; tongue clean, and countenance good; applied four or five strips of adhesive plaster to sustain the stitches; covered the wound with a compress, and covered the abdomen on each side with a warm poultice; ordered the opium to be continued, and ice to be given when wanted.

12, M.—Complains of the afterpains and of soreness along the line

of the incision, which, however, have not prevented her sleeping; has taken two of the pills since the morning's visit. Opium continued.

4, P. M.—Is in less pain; has slept well, and passed urine without assistance; some oozing observed from the lower edge of the incision. Renewed the poultice.

10, P. M.—Feels comfortable; pulse 108; no headache, tongue clean and moist; countenance good; has taken altogether six grains of opium; has no desire for food; thirst diminished; give the pills only when in severe pain.

On the following day the same treatment was continued. In the evening, pain, fever, and cough being present, the patient was bled with much relief. On the 15th, morphia and poultices continued. On the 16th, patient allowed half a pint of buttermilk in small quantities—no morphia through the day—repeated at night. On the 17th, she took a little boiled rice and milk; morphia repeated at bed-time. On the 18th, removed stitches and gave her 15 grs. of calomel. On the 19th, an enema with happy effect; no food through the day. From this time forward, the patient favorably progressed in ever respect, even to nursing her child. On Monday the 26th, the following report is given of her condition.

Monday, 26th.—Did not rest very well last night, suffering from distention of the bowels; tongue, however, clean and moist; pulse 96 and soft; skin cool and countenance cheerful. An ounce of castor oil was administered, which purged freely during the day with relief to all her unpleasant symptoms.

From this time, nothing in her condition occurred worthy of note until the 30th of May, when she complained of pain in the calf of the left leg, which I found tender on pressure, the tenderness circumscribed and unaccompanied by hardness or swelling. There was no febrile action, but tracing the course of the femoral vessels, no pain was felt until the hand approached the ramus of the pubis where the vessel could be felt hard beneath the fingers and painful. There was also pain felt in the iliac fossa when pressed on. As the bowels were still torpid, I ordered ten grains of calomel at night; which dose not purging, was repeated in the morning and followed by an ounce of castor oil at night. At the same time, the leg was enveloped in a warm poultice; the medicines purged freely, and the poultices were renewed night and morning, under which treatment the tenderness gradually disappeared after several days, leaving, however, a feeling of stiffness in the limb and a sense of drawing when an effort is made to extend it or put the foot to the ground.

In consequence of this phlebitis, she has not been allowed to leave her bed, though she is in other respects sufficiently well to do so. The child has not had a moment's sickness since its birth, and no medicament whatever, has ever been given to it. It is a fine hearty child and rather above the average size of children.

Monthly Stethescope and Medical Reporter, (Richmond, Va.)

Extracts from a Notice of Recent Researches on the Origin of Entozoa, more especially of Tape-worms. By ALLEN THOMPSON, M. D., F. R. S. S., London and Edinburgh, and Professor of Anatomy in the University of Glasgow.

There can be no doubt, whatever, that the occurrence of tape-worm in the human subject, as in animals, is dependent on the introduction into the alimentary canal of the Scolex-larva, accidentally or along with food. The most frequent, though not the only, source of these Scolices in this country and a part of the continent of Europe, is probably the Cysticercus cellulosæ of measly pork, when this is used in a partially cooked or raw state. This accords with general belief, and with what has been ascertained in a number of instances of persons affected with tape-worm viz., that they had been in the habit of eating raw or imperfectly-cooked meat. In Abyssinia, where this habit prevails to a great extent, the inhabitants are well known to be remarkably subject to tape-worm; indeed, in that country the affection is looked upon as entirely a natural one.

The difference in the prevalence of Tænia solium in this country and in western Europe, and of the Bothriocephalus latus in the eastern division of the Continent, is well known; but I am not aware whether any observations have yet been made upon the most probable source of the latter entozoon. In Russia, however, where the Bothriocephalus is the usual tape-worm, it has been found that the long continued use of an exclusively animal diet, such as has been recommended for the cure of some diseases, has been followed by the occurrence of Tænia solium. In Switzerland, also, in the eastern parts of which the Bothriocephalus prevails, it has been observed that the hogs are rarely, if ever affected with the Cysticercus; but occasionally pork is introduced from France strongly tainted with this affection, and this may account for the occasional occurrence of the Tænia solium, especially in western Switzerland.*

These circumstances seem to point out very clearly the means to be adopted for the prevention of this troublesome complaint. At the same time, it is probable that there may be other accidental means by which these larvæ of the tape-worm may be introduced; and it will be easily understood how this may more particularly happen in the cases of butchers, cooks, or others in the habit of handling affected meat.

The instances in which the human body is affected with the Cysticercus, or other cystic entozoa, though not very rare, are by no means so frequent as those of tape-worm; but they are much more serious in their effects, more obscure in their origin, and in the meantime, therefore, more difficult to prevent. Scarcely any attention has yet been given to the source from which the various cystic entozoa infesting the human

*See the notice of a case, in which it appeared that the abstinence from the practice of eating raw meat during some time, effected a cure of inveterate tape-worm, with which a person had been long affected, in the June number of the *Edin. Monthly Jour. of Med.* for the present year. A gentleman of my acquaintance, who has long been affected with a very large and inveterate tape-worm, informs me, that formerly he was in the habit of taking animal food very imperfectly cooked.

body may have derived their origin; but the observations already referred to make it extremely probable, that the explanation of their introduction is to be sought for in the same causes which have been shown to operate in the lower animals. Thus it appears to have been demonstrated that the Cænurus of the sheep proceeds from the ova or first embryoes of Tænia, and it is most probable that these are obtained from the dog. The only mode therefore, of removing this affection from a flock in which it may have become prevalent, and in which it is well known sometimes to cause very great losses, must be the careful separation of the dog from the sheep for a certain time; for such time, indeed, as that the dog shall find no more Cænuri in the offal, &c., of the sheep, in eating which it receives the larvæ of its Tænia, and that the dog being free from this Tænia, shall not furnish the ova or embryoes, which being taken accidently with the pasture or water by the sheep, establish themselves in them as encysted Cænuri. V. Siebold states the important fact, that those flocks which are entirely without dogs, and are stall-fed, are never affected with the sturdy.

A remarkable example of the presence of cystic entozoa in the human subject is mentioned by Von Siebold, as having recently been described by Dr. Schleisner, in his "Medical Topography of Iceland," published in 1851. It appears that the people of that country have been for some time suffering, to a great extent, under a very remarkable hydatid disease. The hydatids affect the liver, peritoneum, and subcutaneous texture. Eschricht writes to Von Siebold, that this disease has extended itself to such an alarming degree, about a sixth of the whole population being affected with it, that it is attracting considerable attention at Copenhagen. It produces a long-protracted illness, and terminates in a painful death; and means of cure have not yet been discovered. Von Siebold considers it as extremely probable that this disease, consisting in the developement of a cystic entozoon, depends on the introduction of the ova of a Tænia into the body; and that this arises from the immense quantity of dogs kept in Iceland for the purpose of herding sheep and cattle. Should the further elucidation of this fact lead to the adoption of successful measures for the prevention of the disease, it will be a satisfactory instance of the assistance which may be furnished to rational pathology and the practice of medicine, from physiological researches, which might at first sight have appeared to some to be very remote from such an application.

Before concluding I would call the attention of medical practitioners, more directly than heretofore to the investigation of the habits and circumstances of patients who may be under their care for various verminous affections. There is another department of the subject upon which I have been unable to touch, which is also greatly deserving of increased attention, I mean the collection of observations by those who may be favorably situated, as to the nature of the entozoa which affect different races and nations of mankind, together with the circumstances and modes of life, which may seem to have an influence in determining the nature of the entozoa in different countries. As a single example of what may be expected from well conducted observations of this kind, I may here mention that at Von Siebold's suggestion, Dr. Bilharz,

being in charge of making dissections of the dead bodies in the hospital of Cairo, has already, within the short space of two years, discovered five entozoa with which the Egyptians and other native Africans are affected, and some of them very frequently and to a great extent, which are different from those which have long been known as the common entozoa of the European races. *Glasgow Medica Journal.*

Purification of water supplied to Towns, etc.—At a recent meeting of the Society of Arts, the method proposed by Dr. Clark for purifying water for the supply of towns was described by him, and its applicability for this purpose discussed.

The substances with which water is contaminated may be in two states—suspended and dissolved; both may contain mineral and organic substance.

Spring water contains from 1-20000 to 1-1000, or even 2-1000, dissolved substance, but no suspended substance. This is the case with many kinds of water in and around London; but, when collected at the surface in reservoirs, and exposed to light and air, vegetation commences, and is succeeded by the development of animalcules. After a time, both the plant and animal organisms pass into a state of putrefaction, and become a source of serious contamination.

The water of rivers generally contains less dissolved substance than that of the springs in the same district, and it also contains suspended substances of various kinds that are washed into the rivers from the banks by small streams, rivers, &c.

The separation of suspended substance is effected either by subsidence or by filtration.

The nature of the dissolved substance depends upon the kinds of strata traversed by the water; it generally consists, for the most part, of calcareous salts—sometimes with magnesian salts—alkaline salts, ammoniacal salts, rarely, and in small amounts.

The calcareous and magnesian salts communicate to water the character of *hardness*. This character varies considerably in amount in different kinds of water, and is expressed in degrees, *each degree of hardness being as much hardness as a grain of chalk, or the lime, or the calcium, in a grain of chalk, would produce in a gallon of water, by whatever means it may be dissolved.*

The hardness of most of the water around London is owing to the presence of dissolved carbonate of lime. The amount is so large, that the average supply of water to a single family would yield in eight months 100 pounds of chalk, and in 100 gallons of water there is enough to destroy 35 ounces of soap.

Carbonate of lime itself is very sparingly soluble in water; probably 5000 gallons would be requisite to dissolve one pound avoirdupois. But when combined with an additional amount of carbonic acid, it forms bicarbonate of lime, which is so much more soluble in water, that one pound of carbonate with seven ounces additional of carbonic acid would dissolve in 400 gallons of water; and this is about the amount present in well-water from the chalk strata.

The carbonic acid may be separated from carbonate of lime by heating, as in the ordinary operation of lime-burning, and the lime thus obtained is still more soluble in water than the bicarbonate of lime; so that a pound of carbonate of lime, consisting of—

Lime	9 ounces,
Carbonic Acid	7 ounces,

yields a quantity of lime that may be dissolved in 40 gallons of water.

Thus it appears that carbonate of lime, itself scarcely at all soluble in water, may be rendered soluble in two different ways—either by being deprived of its carbonic acid, or by combining with an additional quantity of carbonic acid.

It is by the latter of these two changes that water, in traversing chalk strata becomes so highly impregnated with carbonate of lime; for carbonic acid is always abstracted from the atmosphere by water during its condensation as rain, &c., and a further amount is frequently dissolved by the water in percolating the vegetable soil.

To separate this dissolved carbonate of lime, so far as may be practicable, is the object of Dr. Clark's method of purification. It is based upon the fact that when a solution of bicarbonate of lime, such as ordinary water, is mixed with a solution of lime, half the carbonic acid is abstracted from the bicarbonate, and both lime and bicarbonate of lime are converted into the very sparingly soluble carbonate.

When this operation is so managed that the lime added is just sufficient to form carbonate with the surplus carbonic acid in the bicarbonate, almost the whole of the dissolved carbonate will be removed from the water, and only so much will remain dissolved as corresponds with the solubility of carbonate of lime.

Bicarbonate of lime in 400 gallons	Carbonate of lime 16 oz. Carbonic acid . . 7 oz.	}	=16 oz. carb. of lime	} =2 lbs.
Lime in 40 gallons of water	. . . . . 9 oz.			

This residual carbonate of lime is always small in amount. Supposing in the above instance the 440 gallons contained 1½ oz. dissolved carbonate of lime, 10-11ths, or 16 oz. would be separated, and only 17½ oz. be left in solution. The water, before being softened, would destroy 35 oz. of soap for every 100 gallons; after being softened, the same quantity would destroy only 5 oz.

Most water contains, besides carbonate of lime, calcareous and magnesian sulphates, chlorides, &c. These substances communicate hardness to water, as well as carbonate of lime; but there is this difference —that the hardness, owing to the presence of these substances, is not removed by limeing. This, however, is not of any practical importance, so far as regards the purification of the water supply of London by this method; for the hardness of the water around London is chiefly owing to carbonate of lime.

Without perhaps being prejudicial to health, the disadvantages arising from the presence of carbonate of lime in water, are numerous and considerable.

1. It is the principal cause of the incrustation of steam-engine boilers.

2. It causes a great, and at the same time useless increase in the consumption of soap, and is deposited in dirty linen in such a manner as to fix the dirt, and prevent its being rendered white.

3. For many culinary purposes it is less suitable than soft water.

Dr. Clark's method is remarkable, inasmuch as it differs from most chemical operations in not introducing any other substance into the water in place of the carbonate of lime separated; and moreover, the separation is effected without the use of any substance foreign to the water in its natural state.

There is another effect produced by this method of purifying water, which does not appear to have been at first anticipated by Dr. Clark. It is the removal of organic substance.

In general the wholesomeness of water is much more affected by the presence of organic substance than by mineral substance; and it seems to be a fact well established by observation, that some of the poisons producing epidemic disease find a congenial habitat in water contaminated with organic substance. Moreover, when organic substance in water undergoes putrefaction, the sulphates always present in water are decomposed, and sulphuretted hydrogen generated. The deleterious character of the water of the Niger was ascribed by the late Professor Daniell to this circumstance.

The amount of organic substance in water may be very minute, but it must not on that account be regarded as insignificant. The amount of organic substance in the most defective kinds of water supplied in London, is very small in proportion to the mineral substance; but it is generally considered by recognized authorities, that, under certain conditions, this organic substance may acquire such a state as to produce disease in those drinking it habitually. In this respect the cause of disease existing in water is analogous to that known as sausage-poison, and that producing the frequent fatal effects of a cut with a dissecting knife, neither of which appear to be chemically tangible.

Investigations relating to the last epidemic of cholera have shown that in one district in London, containing a population of 500,000, which were chiefly supplied with water by two different companies, there were over 4000 deaths from cholera during the epidemic. The only recognizable difference in the conditions and modes of life of the inhabitants, was, that one portion were supplied with water of good quality, drawn from a point high up the Thames; while the other portion were supplied with water drawn from a lower point of the river, where it was profusely contaminated with town-drainage. It proved upon inquiry that the mortality among the former portion was 37 in 10,000, while among the other portion it was 130 in 10,000, or three-and-a-half times as great as in those houses supplied with the better water. Further inquiry showed that in the epidemic of 1848–49 the mortality was uniform throughout the district. There was no such difference between the houses supplied with water by the two companies, the mortality being in one case 118 and in the other 125; but at that period both companies drew their water from nearly the same part of the Thames, low down, where it was contaminated with town-drainage.

The method of purification proposed by Dr. Clark not only effects the separation of carbonate of lime, which as regards the wholesomeness of water is of secondary importance, but it also separates organic substance. At the print works, in Manchester, it is applied specially for this purpose, and in an experiment made upon 3,000,000 gallons at the Chelsea Water Works it is stated by Dr. Miller that the amount of organic substance was reduced to one-third.

Some doubt was expressed by speakers who took part in the discussion, as to whether the organic substance removed by limeing was that suspended or that in solution. Both are in fact removed, but it does not appear that there are any grounds for regarding the one more prejudicial to health than the other.

The removal from water of the carbonate of lime dissolved by carbonic acid, has also, indirectly, an influence upon the contamination with organic substance, by serving as a preventive of vegetation, and of the consequent development of animal organism.

When chalk spring water is pumped up from a well and exposed to light and air, in a clean glass vessel, capable of holding a few gallons, with a glass covering, and so exposed that the changes can be observed as they take place from day to day, it will be seen that all around the sides and bottom a green vegetation will appear in summer time within a few days. In process of time this vegetation tends to a brown, and if a close observation be made, a slight incrustation may be discovered, partly to float on the surface of the water, and partly to adhere to the sides and bottom of the vessel. This incrustation consists of carbonate of lime, slowly precipitated from the water by the separation of the duplicate dose of carbonic acid that kept the carbonate of lime dissolved. It is this carbonic acid that serves as the food of plants, furnishing carbon to them, and the carbonate of lime that was kept in solution by it forms the mineral part of the incrustation. If the glass vessel, after having been exposed as described for several weeks, be emptied, a dirty brownish incrustation, including vegetable substance, may be very well seen, all down the sides, and on the bottom. This brownish incrustation has a strong, offensive, marshy smell. If side by side with the spring water there be exposed, in a similar glass vessel, the same water, previously softened, the softened water will continue for weeks and months unaltered, while that unsoftened water is becoming more and more contaminated by vegetation.

So long back as 1851, the commissioners appointed to report on the quality of the water supplied to London, remarked, that "it appeared to be only a question of time, when the sense of the violation of the river purity (by town drainage) would decide the public mind to the entire abandonment of the Thames as a source of supply, unless artificial means of purification were devised and applied." They also stated, "that a careful series of experiments left no doubt in their minds that the means of conducting this process are certain in their results, and sufficiently simple to be left to the execution of a workman of ordinary intelligence, that the process falls easily into the routine operations of water-works . . . is not attended with my peculiar difficulty on the

large scale, and that the softening of Thames water in its ordinary condition by this process is perfectly practicable, at a cost which would, on the average, increase the price charged to the consumer only four per cent."

Nevertheless, there is only one instance in which this process has been applied to the purification of water supplied for general purposes. At the Plumstead Water-Works, near Woolwich, it has been in successful operation for the last year and a half. The water supplied by this Company is derived from the chalk by boring, and has about twenty degrees hardness, which is reduced to eight degrees by limeing. The works are capable of supplying 600,000 gallons daily, and at the present time about 3,000 houses are supplied.

Eight months after the Plumstead Water Company had been carrying on the softening process with success, and much to the satisfaction of the consumers, it occurred to the Company to try how far the consumers would continue to be satisfied with the water, if the softening process were omitted.

The consequence was that by the twelfth day the surface of the unsoftened water in the reservoirs, though daily renewed, was covered with masses of confervæ to such an extent, that scarce a square inch could be found clear, and a powerful stench of decaying vegetable substance was evolved. Complaints of the water soon followed, and the experiment was discontinued.

In the course of the discussion Mr. Braithwaite put forward objections to the application of Dr. Clark's method of purification, on the ground that a certain amount of lime was necessary for maintaining the functions of animal life, and cited, in support of his argument, experiments made by Liebig, upon pigeons and cows. But, the quantity of lime supplied in solid food is much more than adequate to these requirements; in many districts, the water consumed by large populations, and by great numbers of cattle, is soft with a very small amount of lime in any state; and further, the lime salt, required for the formation of bone, is not carbonate, but phosphate of lime, which is never present in water to more than an infinitesimal amount. Moreover, the experiments cited by Mr. Braithwaite are quite inapplicable to the case in question, because, in those experiments, lime was entirely abstracted from the solid food, as well as from the water supplied to the animals. —*London Pharmaceutical Journal.*

On the Pathology of Hooping Cough.—After enumerating some of the many discrepant and imaginative theories of the nature of hooping cough that writers on the subject had indulged in, the author stated, in answer to the question. To what category of derangements do the most constant and characteristic features of the disease the most intimately unite it?—that, in his opinion, it was to the contagious fevers —to those diseases which consist of the assumption into the body of some specific *materies morbi* introduced from without, and undergoing a certain process of self-multiplication within the system—to the zymotic diseases; in fact, in favor of this view, he said, there was this threefold evidence:—

1st.—That hooping cough was contagious.

2nd.—That it runs a definite course, having certain premonitory signs: certain phenomena when the disease has attained its height, and certain sequelæ.

3rd. That it is self-prophylatic; a person having had it once, does not have it again.

Now the three circumstances—contagion, definite course, and self-prophylaxis, are, he maintained, *par excellence*, the three characteristic circumstances of the contagious fevers, and the possession by any disease of these three features would always be, to him, a sufficient warrant for its admission into that family of disorders. The author then thus stated, in more exact terms, his views: That the catching of hooping-cough depends upon the inoculation of the system with a specific poison; that this poison chooses for itself a certain eliminatory surface as its emunctory; that the surface that it so chooses is the respiratory tract of the mucous membrane, from the conjunctiva to the ultimate bronchial tubes, although the whole of the tract need not be involved in every case; that its material presence gives rise to an exalted sensibility and inflammation of the part; and that the exalted sensibility and inflammation constitute the proximate cause of the specific symptoms. The author's conviction of the correctness of the above theory was based on the following considerations:—

a. The premonitory symptoms of catarrh, injection of the eyes, coryza, &c.

b. The symptoms of vascular disturbance of the trachea, bronchial tubes, large and small, down even, in many cases, to the ultimate lung structure, that generally accompany or follow the cough.

c. The intermediate position in regard to time, of the laryngeal, between the nasal and the bronchial symptoms, implying a creeping down of the condition of the mucous membrane in a regular course.

d. The power which one child will have, who does not hoop, of communicating the disease to another who will; showing that the spasmodic part of the affection is non-essential.

e. The eliminatory power of the surface, which is consistent with the supposed final cause of its being affected.

f. The support derived from the whole weight of the argument of analogy.

Dr. Salter finished his paper by refuting, in succession, certain objections to his theory, which he could conceive others to make, but which, from our limited space, we are unable to enumerate.

Dr. Richardson believed that hooping-cough belonged to the zymotic class of diseases. He advised, that Dr. Salter should ascertain if the mucus is inoculable, and suggested the pig as a fit animal. He had seen pigs with croup, small-pox, measles, and plague. Inoculation acts well in modifying disease, by introducing but a very small dose at once, and for the same purpose, it is advantageous to inoculate from matter obtained from animals which had been the subjects of the disease.

Dr. Edward Smith had proved, in a paper published in the "Transactions" of the Royal Medical and Chirurgical Society, that the deaths from hooping-cough were mainly due to bronchitis; but he believed that

inflammation was only an accident, and not an essence of the disease. He had doubts as to its being a blood disease, in the sense of being introduced into the system in the form of an organic poison; but, at all events, he considered that the spasm is all that distinguishes it necessarily from a common cough. The secretion is in great part due to the violent spasmodic cough; and the plan of treatment, which in a large experience he had found suitable, was to arrest the spasm, and thereby both the cough and the secretion; so that, in a very short time, the attack is reduced to the condition of a common cough. Since the disease may thus be cut short in probably all uncomplicated cases, and yet not be more liable to return than when allowed to run its course, he could not support the author's theory of elimination of the poison in the secretion of the mucus membrane of the larynx and bronchi. It is, however, just possible that the supposition of the gradual destruction in the system of the poison might account for the non-recurrence of the disease when thus cut short; but that would be an assumption, and, if true, would render the theory of elimination of no value in practice. He strongly commended the employment of small and increasing doses of morphia, on the plan laid down by him in a paper published in the *Edinburgh Medical Journal* for May.

Dr. Wynn believed that the disease does not run through a regular course. He admitted that it is a contagious disease, but its evidences are mainly nervons.

Dr. Webster remarked upon the difference of opinion existing as to the pathology of the disease. He did not consider it a contagious disease in the sense that measles is contagious, and he did not think it ran through a definite course. It may also recur. It is more common in the winter, and with northerly winds and frosty weather. Change of wind and air are often beneficial. Treatment will often cut short the attack. He believed the disease chiefly affected the head. It is more fatal amongst female young children.

Dr. Camps thought that the author's cases must have been complicated with some inflammatory condition. Mild temperature is beneficial. It does not run a definite course, and treatment may cut it short.

Dr. Radcliffe did not believe in the necessary connection between hooping-cough and true inflammation, and when that complication exists, the hoop is suspended. The disease is capable of being arrested, and hence does not run through a definite course.

Dr. Headland did not agree with the peripheral theory, and thought that the centric theory accounted for the production of the paroxysm. Many poisons do not act upon eliminating parts of the system. He did not approve the experimentum crucis.

The author replied.—*Proceedings of the Medical Society of London, in London Lancet.*

On the Dropsy of Pregnancy. By M. Becquerel.

Four forms of dropsy are observed in pregnant women, which are far from being of the same importance.

1. *Mechanical Dropsies,* perhaps the most common, are due to the pressure exerted by the gravid uterus, their production being favored

by the lesser density of the blood in pregnant women, and the slight diminution of albumen that exists in its serum. These dropsies are confined to the lower extremities, are of no importance beyond their inconvenience, and disappear after delivery.

2. *Dropsies due to Changes in the Blood, but unaccompanied by Albuminuria.*—The change in the blood which induces these dropsies, consists in a diminution in the amount of the albumen of the serum, a diminution that is sometimes considerable, and for which we can assign no other cause than the fact of the pregnancy, and its influence on the various immediate principles of the blood. This description of dropsy, like the two next, tends to become general. It is of importance to distinguish it from the two others, and especially the 4th, for it does not predispose to eclampsia. It is by analysis of the blood alone that we can establish its existence. It disappears also after pregnancy, but far more slowly. It has been observed that women suffering from it remain feeble for a long period, their "getting up" being slow and difficult.

3. *Dropsies with Changes in the Blood and Albuminuria, but without Bright's Disease, properly so called.*—These dropsies are the consequence of the diminution of the albumen of the blood, produced by its deperdition through the kidney. Until lately it was supposed that such loss might take place without material lesion of the kidney; but from the investigations made by M. Robin and the author, it results that this albuminuria is due to a special modification taking place in the epithelial cells of the tubuli, a modification consisting in the infiltration of the cells and tubuli by numerous granules of a proteric nature. This infiltration is analogous to that which M. Robin had already found in choleraic albuminuria, and like it is susceptible of cure. The absolute diagnosis during life of this disease from Bright's affection is very difficult, and yet it is highly important, as the prognosis must be entirely based upon it. It is in women who are the subjects of these dropsies that we have to fear eclampsia, and the predisposition to puerperal peritonitis. Eclampsia is not, however, a necessary consequence; and when we find general dropsy, change in the blood, and albuminuria co-existing, we still cannot affirm that this terrible accident will follow. On the other hand, whenever we find eclampsia we are certain of finding, not only dropsy, but albuminous urine, and change in the blood. In respect to the termination of this form of dropsy it may be observed, that if eclampsia does not supervene, a cure is almost certain, while, in the case of its occurring the result is dependent upon that of the eclampsia.

4. *Dropsies due to Bright's Disease.*—It is very important to establish the diagnosis of this form. We may lay stress upon the somewhat larger quantity of albumen, the presence of fragments of the tubuli, of fibrinous filaments, and fatty globules. When eclampsia complicates this form it is invariably fatal; and even when eclampsia does not occur, the disease is not arrested after delivery. The dropsy continues to increase, the termination proving, after a certain period, fatal.—*London Med. Times, from Rev. Medico-Chirurgicale.*

On the Treatment of Hæmoptysis. By M. ARAN.—M. Aran agrees with those who entirely condemn the employment of blood-letting in the

treatment of hæmoptysis, as it only temporarily arrests the bleeding, while it is dangerous, owing to the debility, and increased susceptibility to the intercurrent affections it gives rise to. He has, for some time past, been engaged in testing the efficacy of the various hæmostatic agents employed in hæmoptysis; and in this paper he givesthe results of his observations. He considers the essence of turpentine a most valuable remedy, given in doses of from 10 to 30 drops every hour, either in a spoonful of water, or mixed up with magnesia, as a bolus. Marked amendment usually occurs in a few hours, and in from twenty-four to thirty-six hours the bleeding ceases. It is less suitable for young or plethoric subjects with febrile action, than in weak cachectic individuals, exhibiting atonic characteristics. Ergot of rye and ergotine are far less efficacious; but chloride of sodium, given in doses of 1 to 2½ drachms, proves very efficacious in some cases, and has the advantage of being always at hand. Among the astringents, tannin, and especially gallic acid, are to be recommended; the latter, while quite as efficacious, does not exert the same dessicating effect upon the tissues, or induce the obstinate constipation produced by tannin. As a mean dose, M. Aran gives 15 centigrammes (a centigramme is 1-7th of a grain) every hour or alternative hour. He has had little experience in the use of emetic and nauseating remedies; but in three cases in which veratrine was employed, the bleeding ceased as if by enchantment. This class of remedies, indeed, would deserve to stand in the first class of hæmostatic agents, were there not others possessing like efficacy, and yet not giving rise to the painful nausea these produce. M. Aran has derived great advantage from the combined use of digitalis and nitre. In ordinary cases, he gives in the twenty-four hours, 30 centigrammes of digitalis, and 1½ gramme (a gramme is 15 grains) of nitre, divided into four doses; but in very severe cases, these doses may be very much increased, so that the digitalis has been given to the extent of 1½ gramme, and the nitre to 4 grammes, without injuriously affecting the action of the heart, while the effect produced on the hemorrhage has been remarkable. Its arrest never, however, takes place so suddenly, under the use of these medicines, as when turpentine or gallic acid is employed.

In abundant, but not immediately dangerous hemorrhage, we can choose among any of the above-mentioned means. In extremely abundant hemorrhage, we must arrest the flow as speedily as possible, by agents which do not depress the powers of the economy too much, and which are not too slow in their operation. Neither ergot, acetate of lead, nor alum, is sufficient to meet the danger. Turpentine, gallic acid, chloride of sodium, or nitre with digitalis, can alone be trusted; but the necessity of increasing the dose, with the intensity of the hemorrhage, may perhaps render the chloride of sodium, and especially the nitre and digitalis, dangerous, through the possibility of the production of a too great depression of the heart's action. It is, therefore, to gallic acid, or turpentine, that we must chiefly trust in these severe cases; and we must not limit ourselves to their employment, but also endeavor to procure a temporary arrest of the hemorrhage by ligatures to the limbs, and the application of ice to the chest, allowing the means employed internally to consolidate this temporary cure.—*Med. Times and Gaz., Jan.*, 1856, *from Gaz. Hop.*, 1855.

Abstract of Meteorological Observations for June, 1856, made at Philadelphia, Pa. Latitude 39° 57′ 28″ N., Longitude 75° 10′ 40″ W. from Greenwich. By PROF. JAMES A. KIRKPATRICK.

1856. June.	Barometer. Daily Mean	Barometer. Mean Daily Range.	Thermom. Daily Mean	Thermom. Mean Daily Range	Rel. Humid. 2 P.M.	Force of Vapor 2 P.M.	Dew Point 2 P.M.	Rain	Prevailing Winds.	Remarks.
	Inches.	Inches.	Deg.	Deg.	Hunds.	Inches.	Deg.	Inches.	Points.	
1	29.990	.034	66.3	11.3	49	.370	50.7		SW.	Morning cloudy; afternoon and evening clear. *Barometer highest* 30.054. *Thermometer lowest* 54°.
2	29.915	.075	76.0	9.7	45	.495	58.7		SW.	Morning and afternoon cloudy; evening clear.
3	29.803	.109	82.0	6.0	46	.608	64.6		SW.	Cloudy.
4	29.729	.074	84.0	2.0	48	.697	68.5		SW.	Clear.
5	29.864	.146	72.3	13.0	55	.483	58.0	0.022	NE.	Morning clear; noon, strong wind from N. E. continuing about two hours; night, light *rain*.
6	29.959	.098	58.3	14.0	100	.465	57.0	1.111	NE.	Cloudy; *rain* from 10, A.M. to 6, P.M. *Therm. lowest* 54°.
7	29.863	.097	68.0	9.7	66	.502	59.2		NE.	Cloudy.
8	29.684	.178	70.0	2.0	76	.593	63.8	0.003	SSW.	Cloudy; 10 to 11, A.M., *rain*, light showers during the afternoon.
9	29.627	.068	75.0	5.0	43	.429	54.7		(Var.)	Cloudy.
10	29.713	.086	75.3	1.7	55	.560	62.2		SW.	Cloudy.
11	29.743	.036	77.7	2.3	52	.571	62.8		SW.	Clear.
12	29.758	.051	74.5	3.2	69	.638	66.0		SE.	Morning fog; afternoon and evening cloudy.
13	29.677	.081	76.3	1.8	51	.520	60.1		(Var.)	Morning and aft. cloudy; evening clear.
14	29.642	.037	75.5	0.8	62	.611	64.7	0.006	SW.	Cloudy; light *showers* at 6¼, 10 and 11, A.M.
15	29.714	.072	72.2	3.3	43	.372	50.8		W.	Morning and evening clear; afternoon cloudy.
16	29.876	.163	71.7	2.2	44	.381	51.5		W.	Clear.
17	29.907	.040	75.0	3.3	47	.464	56.9		SW.	Cloudy; 10, P.M. *rain* began.
18	29.729	.178	74.3	2.0	72	.627	65.4	0.500	(Var.)	Cloudy; *rain* continued till 12, M.
19	29.732	.041	75.0	2.7	58	.573	62.9		(Var.)	Morning and afternoon cloudy; evening clear.
20	29.833	.101	79.8	4.8	50	.608	64.6		SW.	Clear.
21	29.905	.072	86.2	6.3	41	.652	66.6		W.	Clear.
22	29.859	.049	89.0	3.2	39	.692	68.3	0.005	W.	Morning and evening clear; light *showers* with high wind from 5 to 7, P.M.
23	29.882	.076	80.8	8.2	66	.703	68.8	0.016	(Var.)	Cloudy; light showers at intervals from 8½, A.M. to 3, P.M.
24	29.872	.047	77.7	3 8	49	.532	60.7		(Var.)	Morning and afternoon cloudy; evening clear.
25	29.801	.071	76.3	2.0	70	.689	68.2	0.014	(Var.)	Cloudy; *rain* from 9 to 11, A.M.
26	29.718	.083	81.5	5.2	61	.761	71.1		S.	Cloudy.
27	29.736	.065	83.0	1.8	26	.342	48.6		NW.	Morning cloudy; afternoon and evening clear.
28	29.722	.086	83.7	2.0	53	.720	69.5		SW.	Clear.
29	29.585	.137	89.0	5.3	50	.818	73.3		SW.	Clear. *Bar. lowest* 29.553. *Thermometer highest* 98°.
30	29.599	.038	90.5	1.5	50	.818	73.3		SW.	Morning cloudy; afternoon and evening clear.
Means for June, 1856	29.781	.083	77.2	4.7	55	.576	62.4	1.677	S. 45° 48′ W. 5-100.	
Means for June, 5 yrs.	29.836	.096	73.2	4.4	55	.561	61.4	3.735	S. 65° 49′ W. 27-1003.	

The Monthly Range of the Mercury in the Barometer was 0.501 of an inch, and in the Thermometer 44°.